

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(139) L-1	SANGAMON	5	1
		ILLINOIS	CONTRACT NO. 72H55	

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	SUMMARY OF QUANTITIES
4-5	LIGHTING PLANS

PROPOSED HIGHWAY PLANS

FAP ROUTE 753 (IL 104)
SECTION (139) L-1

ADDITION OF OVERHEAD LIGHTING
SANGAMON COUNTY

C-96-030-15

STANDARDS

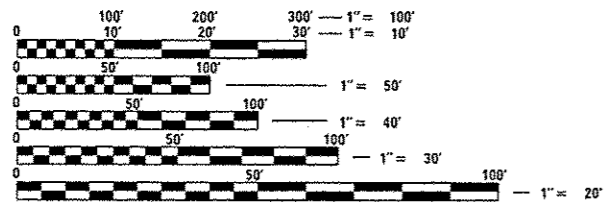
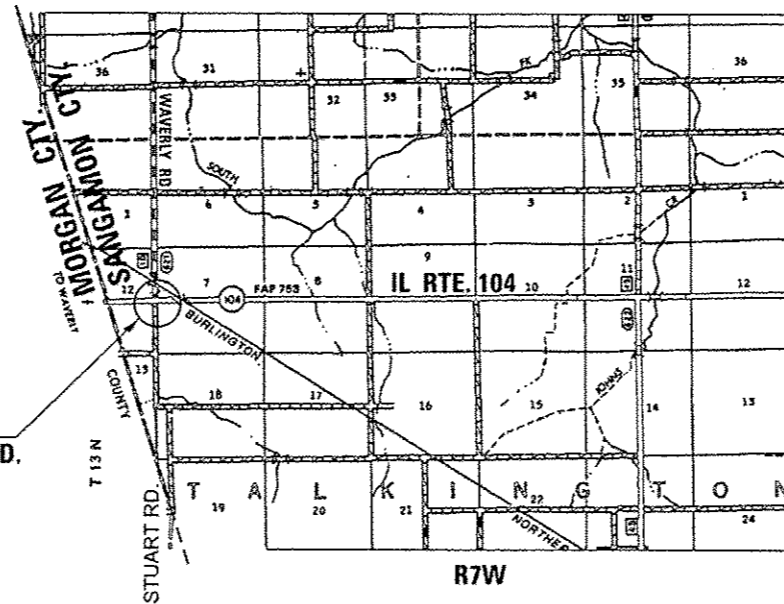
000001-06	805001-01
001006	821101-02
701001-02	825001-03
701006-05	830006-04
701201-04	836001-02
701901-06	838001

IL 104 ADT (YR. 2015)

PV = 2575	(81.42%)
SU = 250	(8.20%)
MU = 225	(7.38)
TOTAL = 3050	(100%)



LOCATION OF SECTION INDICATED THUS: - [Black Box] -



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER KEITH DONOVAN 217-782-4761
PROJECT MANAGER ED KERN 217-524-7547

GROSS LENGTH = 250 FT. = 0.05 MILE
NET LENGTH = 250 FT. = 0.05 MILE

CONTRACT NO. 72H55

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 21 2016

[Signature] REGIONAL ENGINEER

Aug 12 2016
[Signature] ENGINEER OF DESIGN AND ENVIRONMENT

Aug 12 2016
[Signature] DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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GENERAL NOTES:

1. ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
3. LIGHT POLE FOUNDATIONS SHALL BE INSTALLED PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET THE HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS. AFTER UNIT DUCT IS INSTALLED, FOUNDATIONS SHALL BE FILLED WITH FINE AGGREGATE ACCORDING TO ARTICLE 836.03. WASHERS USED TO INSTALL THE POLE SHALL BE LARGE ENOUGH TO FULLY COVER THE SLOTTED HOLES IN THE POLE BASE PLATE. THE VOIDS ON THE BOTTOM SIDE OF THE ALUMINUM POLE BASE MUST BE SEALED FROM RODENT ENTRY WITH STAINLESS STEEL SCREEN.
4. CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM UTILITY LINES. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONFLICTS BETWEEN PROPOSED LIGHTING POLE LOCATIONS AND UTILITY LINES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE APPLICABLE UNIT DUCT OR UNDERGROUND CONDUIT PAY ITEM.
6. UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA. SHALL BE SCHEDULE 80 AS NOTED IN THE PLANS.
7. THE CONTRACTOR SHALL FURNISH AND INSTALL A CONCRETE WORK PAD IN FRONT OF THE LIGHTING CONTROLLER PER SECTION 825 OF THE STANDARD SPECIFICATIONS.
8. INSTALL HORIZONTAL MOUNT LUMINAIRES PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY AS REQUIRED BY ARTICLE 821.04 OF THE STANDARD SPECIFICATIONS.
9. NO POLE TO BE INSTALLED IN THE FLOWLINE OF DITCH. POLE SETBACK TO BE INCREASED IF NECESSARY AS DIRECTED BY THE ENGINEER.
10. ANY REFERENCE TO A STANDARD IN THE PLAN SHALL BE INTERPRETED TO MEAN THE EDITION, AS INDICATED BY THE SUB-NUMBER LISTED ON THE COVER SHEET, OR THE COPY OF THE STANDARD INCLUDED IN THE PLANS

COMMITMENTS:

1. THE FIELD/RESIDENT ENGINEER SHALL CONTACT STUDIES AND PLANS COVERING ANY MAJOR PLAN CHANGES TO MAKE SURE NO PREVIOUS COMMITMENTS (NOT LISTED) WERE MADE AFFECTING THE DESIGN, AND TO ALLOW IMPROVED DESIGN FOR THE FUTURE.

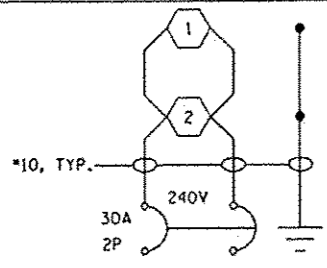
EXAMINED	June 1	20	16	
<i>Joseph P. Myer</i>				
PROGRAM DEVELOPMENT ENGINEER				
EXAMINED	June 3	20	16	
<i>Ron Dubambeau</i>				
PROJECT IMPLEMENTATION ENGINEER				
DISTRICT SIX				
EXAMINED	JUNE 3rd	20	16	
<i>John C. [Signature]</i>				
OPERATIONS ENGINEER				

PPS # 6-00494-0000
 CONSTR. CODE
 100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY
				0021 RURAL
67100100	MOBILIZATION	LSUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1
81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	50	50
81603010	UNIT DUCT, 600V, 2-1C NO.10, 1/C NO.10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	338	338
82500300	LIGHTING CONTROLLER, POLE MOUNTED, 240VOLT, 30AMP	EACH	1	1
83003600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	EACH	2	2
83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	2	2
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	8	8
X1400094	LUMINAIRE, LED, HORIZONTAL MOUNT, LOW WATTAGE	EACH	2	2

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Rev.

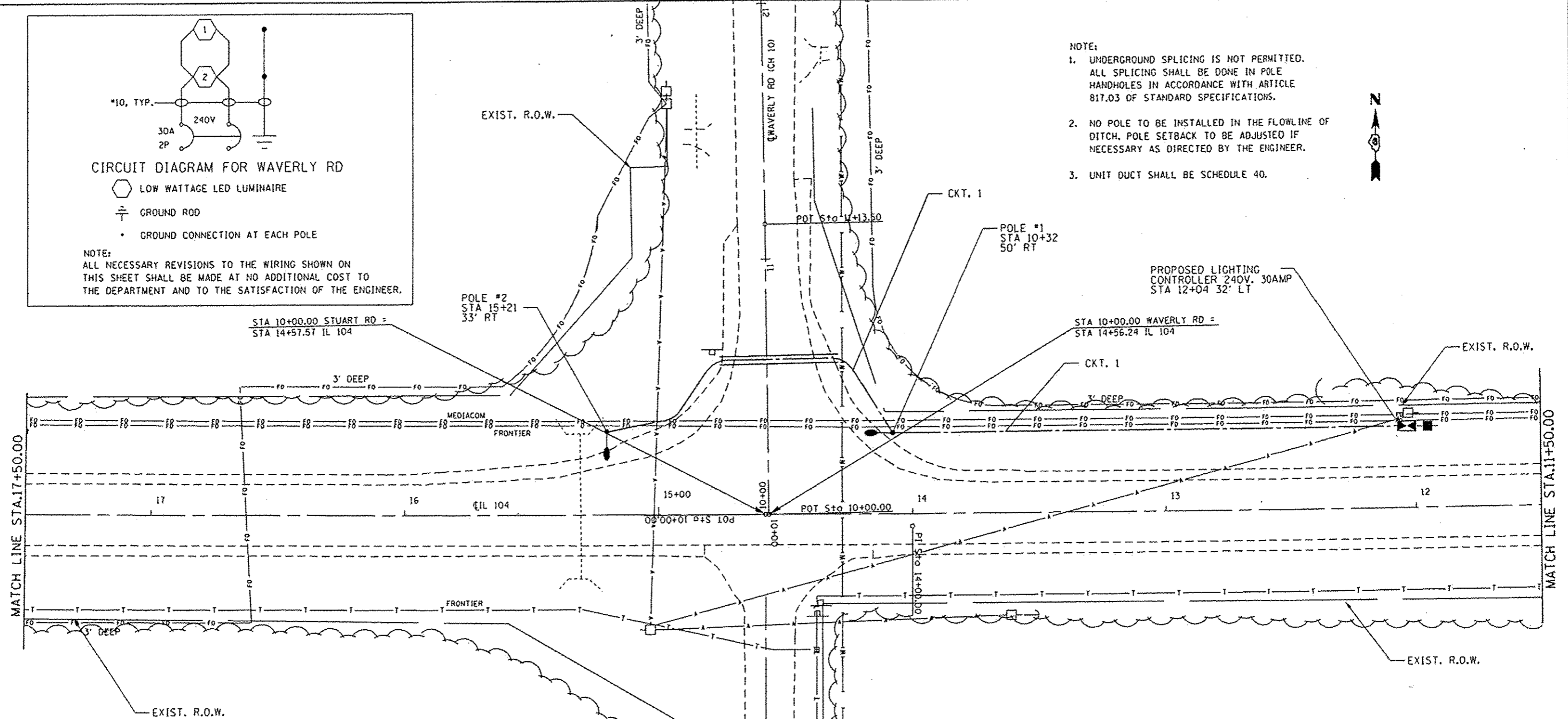


CIRCUIT DIAGRAM FOR WAVERLY RD

- LOW WATTAGE LED LUMINAIRE
- ⊕ GROUND ROD
- GROUND CONNECTION AT EACH POLE

NOTE:
ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

- NOTE:
1. UNDERGROUND SPLICING IS NOT PERMITTED. ALL SPLICING SHALL BE DONE IN POLE HANDHOLES IN ACCORDANCE WITH ARTICLE 817.03 OF STANDARD SPECIFICATIONS.
 2. NO POLE TO BE INSTALLED IN THE FLOWLINE OF DITCH. POLE SETBACK TO BE ADJUSTED IF NECESSARY AS DIRECTED BY THE ENGINEER.
 3. UNIT DUCT SHALL BE SCHEDULE 40.



BILL OF MATERIALS

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
61100100	MOBILIZATION	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD T01201	LSLM	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
81028150	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	50
81603010	UNIT DUCT, 600V, 2-1C NO. 10, 1/2" NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	338
82500300	LIGHTING CONTROLLER, POLE MOUNTED, 240VOLT, 30AMP	EACH	1
83003600	LIGHTING POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	EACH	2
83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8"x8"	EACH	2
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	8
X1400094	LUMINAIRE, LED, HORIZONTAL MOUNT, LOW WATTAGE	EACH	2

EXIST. CURVE C2300
 P.I. STA. = 14+00.00
 $\Delta = 2^\circ 06' 33''$ (RT)
 $D = 0^\circ 12' 03''$
 $R = 28,521.20'$
 $T = 525.00'$
 $L = 1,049.88'$
 $E = 4.83'$
 $\theta = \dots$
 T.R. = \dots
 S.E. RUN = \dots
 P.C. STA. = 8+75.00
 P.T. STA. = 19+24.88

LEGEND

- PROPOSED LIGHTING UNIT, 45' MOUNTING HEIGHT ALUMINUM POLE, 15' DAVIT ARM, LOW WATTAGE HORIZONTAL MOUNT LED LUMINAIRE, TYPE III.
- ELECTRIC SERVICE INSTALLATION, 120/240V, 1 PHASE, 4 WIRE
- PROPOSED LIGHTING CONTROLLER, POLE MOUNTED, 240 VOLT, 30 AMP
- PROPOSED UNIT DUCT, 600 V, 2-1C NO. 10 1/2" NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
- PROPOSED UNDER GROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA. (SCH. 80)

REV.

**ILLINOIS DEPARTMENT OF TRANSPORTATION
LUMINAIRE PERFORMANCE TABLE**

GIVEN CONDITIONS

ROADWAY DATA	Pavement Width	12 ft.
	Number of Lanes (in one direction of travel)	1
	I.E.S. Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA	Mounting Height	45 ft.
	Mast Arm Length	15 ft.
	Pole Set-Back From Edge of Pavement	15 ft.
LUMINAIRE DATA	Luminaire Type	LED
	Luminaire Wattage (Maximum)	200 WATTS
	I.E.S. Lateral Distribution	Type III
	Lamp Lumen Depreciation Factor	0.90
	Luminaire BUG Rating	U=0
	Dirt Depreciation Factor	0.80
	Equipment Factor	0.95
Total Light Loss Factor	0.684	
LAYOUT DATA	Spacing	140 ft.
	Configuration	One Sided
	Luminaire Overhang over edge of pavement	0 ft.

NOTE: Variations from the above specified IES distribution pattern may be requested, and acceptance of variations will be subject to review by the engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above. TM-21 and LM-80 reports, or TM-28 and LM-84 reports, must be attached and must support the Lamp Lumen Depreciation Factor given above.

LUMINANCE	Average Luminance, L_{AVE}	0.6 Cd/m ²
	Uniformity Ratio, L_{AVE}/L_{MIN}	3.5:1
	Uniformity Ratio, L_{MAX}/L_{MIN}	6.0:1
	Max. Veiling Luminance Ratio, L_V/L_{AVE}	0.3:1