

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P926191

Luminaire Tested: DFN2DIP-TR3F0-030D040US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926191
REPORT IS A COMBINATION OF REPORTS P901806 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-030D040US950-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

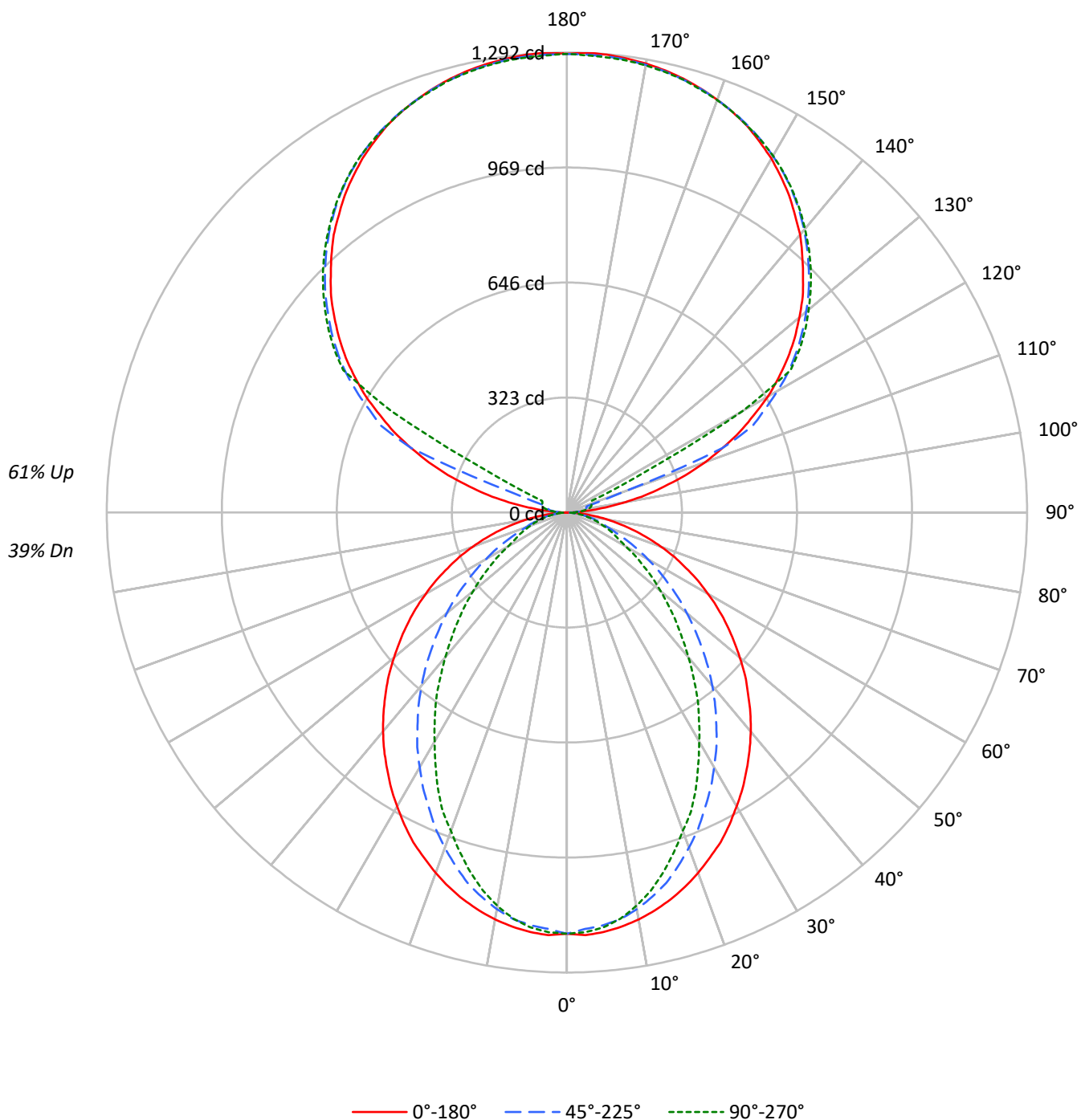
Lumens per Lamp: N/A
Luminaire Lumens: 6210.5 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 53.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46
1	96	92	88	85	87	83	80	78	68	66	64	54	53	52	41	41	40
2	87	80	75	70	79	73	68	64	60	57	54	48	46	44	37	35	34
3	80	71	64	58	73	65	59	54	53	49	46	43	40	37	33	31	29
4	73	63	55	50	67	58	51	46	48	43	39	38	35	32	30	27	26
5	67	56	48	43	61	52	45	40	43	38	34	35	31	28	27	25	23
6	62	51	43	37	56	46	40	35	39	34	30	31	28	25	25	22	20
7	57	46	38	33	52	42	35	31	35	30	26	29	25	22	23	20	18
8	53	42	34	29	49	38	32	27	32	27	23	26	22	20	21	18	16
9	50	38	31	26	45	35	29	24	29	24	21	24	20	18	19	17	15
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1474	1474	1474
5°	1476	1449	1459
10°	1460	1420	1410
15°	1439	1372	1336
20°	1412	1306	1245
25°	1384	1232	1158
30°	1346	1157	1047
35°	1310	1076	949
40°	1272	992	838
45°	1229	900	737
50°	1184	807	638
55°	1137	707	544
60°	1082	603	447
65°	1020	498	401
70°	944	399	361
75°	848	350	327
80°	710	289	280
85°	483	187	205

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1229 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	1.8
10°-20°	304.3	4.9
20°-30°	427.3	6.9
30°-40°	465.7	7.5
40°-50°	428.1	6.9
50°-60°	336.2	5.4
60°-70°	218.8	3.5
70°-80°	112.6	1.8
80°-90°	31.0	0.5
90°-100°	42.5	0.7
100°-110°	158.3	2.5
110°-120°	419.9	6.8
120°-130°	696.4	11.2
130°-140°	739.7	11.9
140°-150°	687.5	11.1
150°-160°	552.7	8.9
160°-170°	356.1	5.7
170°-180°	122.6	2.0
0°-30°	842.5	13.6
0°-40°	1308.2	21.1
0°-60°	2072.5	33.4
0°-90°	2434.9	39.2
90°-120°	620.6	10.0
90°-150°	2744.1	44.2
90°-180°	3776.0	60.8
0°-180°	6210.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1183	1183	1183	1183	1183	
5°	1183	1178	1164	1173	1170	112
15°	1125	1113	1077	1057	1046	317
25°	1021	987	916	872	856	470
35°	880	825	731	664	640	551
45°	719	648	535	459	434	556
55°	547	464	348	284	263	489
65°	369	283	186	150	147	366
75°	197	122	86	78	77	208
85°	46	24	20	20	20	53
90°	1	11	19	23	25	6
95°	60	30	36	41	40	72
105°	283	311	57	67	71	303
115°	536	552	575	144	76	527
125°	758	770	787	794	797	676
135°	938	952	961	970	968	724
145°	1088	1087	1102	1109	1104	680
155°	1198	1189	1200	1206	1198	552
165°	1262	1256	1259	1266	1259	356
175°	1291	1284	1286	1292	1283	123
180°	1288	1288	1288	1288	1288	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1182.9	1182.9	1182.9	1182.9	1182.9
2.5°	1188.2	1182.9	1171.0	1181.8	1179.7
5°	1182.9	1177.5	1163.6	1173.2	1170.0
7.5°	1173.2	1166.8	1151.9	1156.1	1150.7
10°	1160.4	1152.9	1131.5	1128.2	1121.9
12.5°	1144.3	1134.7	1105.8	1099.4	1087.6
15°	1125.1	1113.2	1076.9	1056.6	1045.9
17.5°	1102.5	1085.5	1040.4	1017.0	999.8
20°	1076.9	1055.4	1001.9	975.3	951.6
22.5°	1049.1	1024.4	962.3	926.0	909.9
25°	1021.3	986.9	916.3	872.4	856.3
27.5°	988.1	951.6	873.5	823.2	798.5
30°	952.8	912.0	826.4	771.9	742.9
32.5°	918.4	869.2	781.5	717.2	690.4
35°	880.0	825.3	731.1	663.7	640.1
37.5°	842.5	783.5	684.0	610.1	583.5
40°	802.9	738.7	634.8	558.8	531.0
42.5°	762.2	693.7	585.6	506.3	479.6
45°	719.4	647.6	535.3	459.2	433.5
47.5°	678.7	602.7	487.1	411.0	387.5
50°	633.7	557.7	440.0	366.0	343.6
52.5°	589.8	509.5	395.1	324.4	304.0
55°	546.9	463.5	347.8	283.7	263.4
57.5°	503.1	417.5	306.2	246.2	229.1
60°	458.1	372.5	262.3	207.7	190.6
62.5°	414.3	328.7	224.8	173.4	164.9
65°	369.3	282.6	186.2	149.9	146.6
67.5°	326.6	239.7	149.9	131.7	128.4
70°	281.5	198.1	124.1	113.4	109.1
72.5°	238.7	159.4	103.8	95.3	93.1
75°	196.9	122.0	85.7	78.1	77.1
77.5°	155.2	86.6	67.4	63.2	61.0
80°	116.7	62.1	51.3	47.1	47.1
82.5°	81.3	41.8	35.3	33.2	33.2
85°	46.0	23.5	20.3	20.3	20.3
87.5°	17.2	8.5	8.5	7.5	7.5
90°	0.9	11.2	18.6	23.4	25.1
92.5°	23.4	19.6	22.3	24.2	25.1
95°	60.5	29.8	36.3	41.0	40.1
97.5°	109.0	32.6	47.5	50.4	51.2
100°	164.9	37.3	53.1	60.5	62.4
102.5°	226.4	224.7	55.0	65.2	68.0
105°	283.2	311.3	56.9	67.1	70.8
107.5°	349.5	372.7	58.8	69.0	72.7
110°	412.9	432.4	163.1	69.9	73.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	472.5	489.2	473.4	71.7	74.6
115°	535.8	551.6	575.0	143.5	76.5
117.5°	590.8	609.4	625.3	492.0	247.8
120°	652.3	666.3	683.1	694.3	568.5
122.5°	704.4	719.4	738.1	743.6	744.6
125°	757.6	769.8	787.4	794.0	796.8
127.5°	806.0	819.1	833.1	842.5	843.3
130°	851.7	866.7	876.8	887.1	886.3
132.5°	898.3	910.5	920.7	929.1	928.2
135°	937.5	952.5	960.8	970.1	968.3
137.5°	978.4	989.6	999.0	1008.3	1005.5
140°	1018.5	1026.0	1036.2	1044.6	1040.0
142.5°	1052.2	1058.7	1070.8	1078.1	1073.5
145°	1087.6	1086.6	1102.3	1108.9	1104.3
147.5°	1118.2	1115.4	1131.3	1135.9	1132.3
150°	1148.0	1141.6	1156.5	1162.1	1157.4
152.5°	1173.2	1165.8	1179.7	1185.3	1178.9
155°	1197.5	1189.2	1200.3	1205.9	1198.4
157.5°	1217.0	1209.6	1218.1	1224.6	1217.0
160°	1233.8	1228.2	1233.8	1239.3	1232.9
162.5°	1248.7	1243.2	1247.8	1254.3	1245.9
165°	1261.8	1256.2	1259.0	1265.5	1259.0
167.5°	1272.1	1266.3	1269.3	1275.8	1267.4
170°	1280.5	1274.8	1276.6	1283.2	1274.8
172.5°	1286.0	1280.5	1282.4	1288.9	1280.5
175°	1290.6	1284.1	1286.0	1292.5	1283.2
177.5°	1292.5	1286.0	1286.9	1293.5	1285.1
180°	1287.9	1287.9	1287.9	1287.9	1287.9

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	7.34	8.09	8.40	9.15	10.56	3.32	4.07	4.37	5.12	6.54
	3H	9.01	9.68	10.07	10.74	12.18	4.50	5.17	5.56	6.23	7.67
	4H	9.61	10.24	10.68	11.30	12.75	4.94	5.57	6.01	6.64	8.08
	6H	10.01	10.60	11.10	11.66	13.12	5.25	5.84	6.33	6.90	8.36
	8H	10.13	10.69	11.22	11.77	13.22	5.34	5.89	6.42	6.97	8.43
	12H	10.19	10.72	11.28	11.79	13.27	5.38	5.90	6.47	6.98	8.45
4H	2H	7.35	7.99	8.43	9.05	10.49	3.90	4.54	4.98	5.60	7.04
	3H	9.16	9.69	10.25	10.78	12.24	5.24	5.76	6.32	6.85	8.31
	4H	9.84	10.33	10.93	11.41	12.89	5.78	6.26	6.87	7.34	8.82
	6H	10.35	10.76	11.44	11.86	13.34	6.19	6.60	7.28	7.70	9.18
	8H	10.51	10.90	11.61	12.00	13.48	6.31	6.70	7.41	7.79	9.28
	12H	10.60	10.95	11.72	12.06	13.55	6.37	6.72	7.48	7.83	9.32
8H	4H	9.80	10.19	10.90	11.29	12.78	6.05	6.43	7.14	7.53	9.02
	6H	10.36	10.68	11.48	11.81	13.30	6.55	6.87	7.67	8.01	9.49
	8H	10.57	10.85	11.69	11.97	13.47	6.74	7.02	7.87	8.14	9.64
	12H	10.70	10.94	11.83	12.06	13.60	6.85	7.10	7.98	8.21	9.75
12H	4H	9.75	10.10	10.87	11.21	12.70	6.05	6.40	7.16	7.50	9.00
	6H	10.33	10.61	11.46	11.73	13.24	6.60	6.88	7.73	8.00	9.50
	8H	10.54	10.79	11.67	11.90	13.45	6.80	7.05	7.93	8.16	9.70

END OF REPORT