

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: P913871

Luminaire Tested: DFN2DIP-PN3F0-030D050US927-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P913871
REPORT IS A COMBINATION OF REPORTS P901060 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D050US927-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

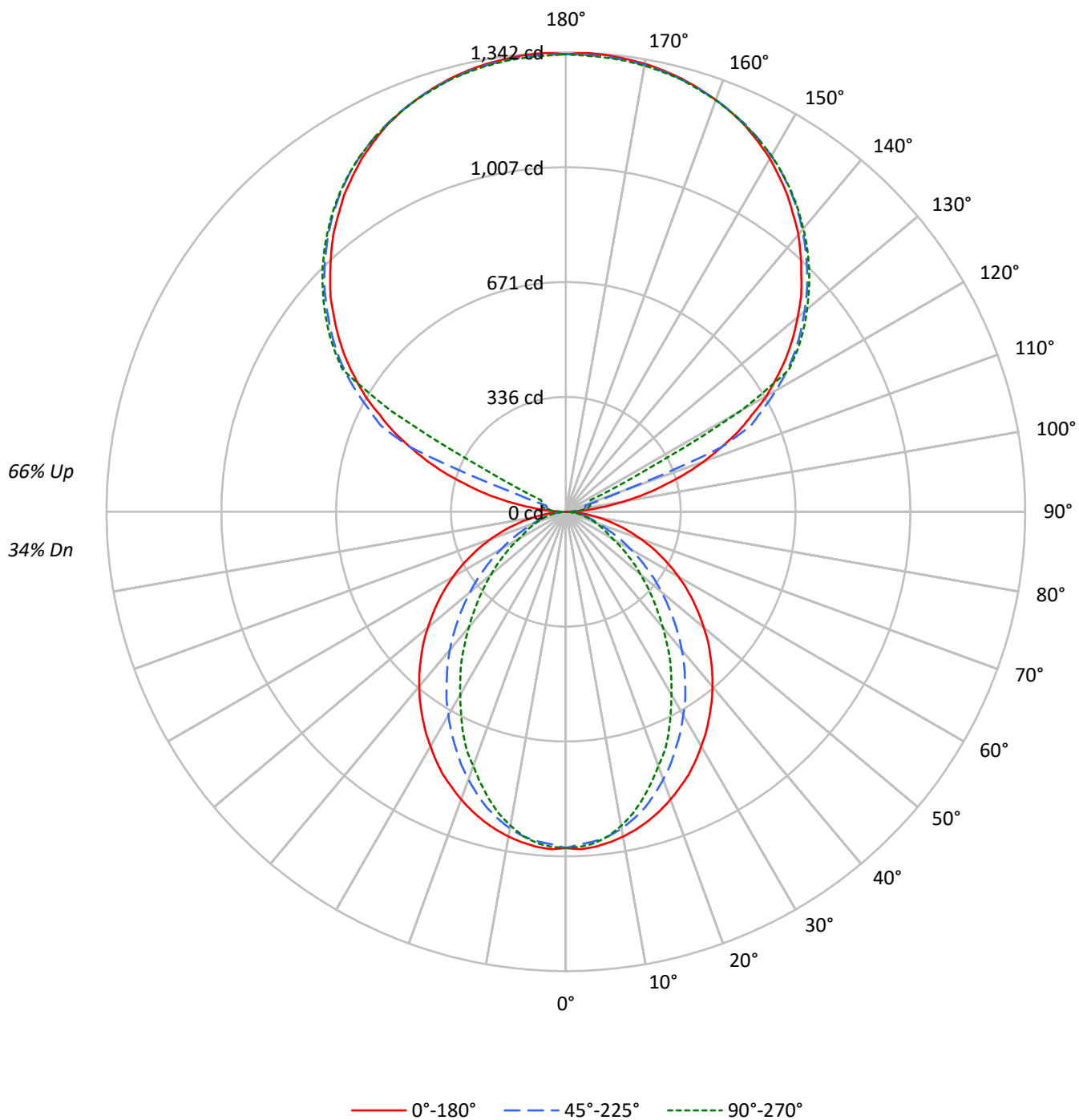
Lumens per Lamp: N/A
Luminaire Lumens: 5941.4 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 61.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41
1	95	90	87	83	85	82	79	76	66	64	62	51	49	48	37	36	36
2	86	79	74	69	78	72	67	63	58	54	52	45	43	41	33	32	30
3	79	70	63	58	71	63	58	53	51	47	44	40	37	35	30	28	26
4	72	62	55	49	65	56	50	45	46	41	37	36	33	30	27	25	23
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20
6	61	50	42	36	55	45	39	34	37	32	28	29	26	23	22	20	18
7	57	45	37	32	51	41	34	30	34	29	25	27	23	20	20	18	16
8	52	41	33	28	47	37	31	26	31	26	22	24	21	18	19	16	14
9	49	37	30	25	44	34	28	23	28	23	20	22	19	16	17	15	13
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1148	1148	1148
5°	1149	1129	1137
10°	1137	1106	1099
15°	1121	1069	1042
20°	1100	1018	971
25°	1078	961	903
30°	1049	902	817
35°	1020	839	741
40°	991	774	654
45°	957	702	576
50°	922	630	499
55°	885	552	425
60°	842	471	350
65°	794	389	314
70°	734	312	283
75°	659	274	257
80°	552	227	221
85°	375	148	164

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 957 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	1.5
10°-20°	252.7	4.3
20°-30°	354.8	6.0
30°-40°	386.8	6.5
40°-50°	355.5	6.0
50°-60°	279.2	4.7
60°-70°	181.7	3.1
70°-80°	93.5	1.6
80°-90°	26.2	0.4
90°-100°	44.1	0.7
100°-110°	164.3	2.8
110°-120°	435.8	7.3
120°-130°	722.8	12.2
130°-140°	767.8	12.9
140°-150°	713.6	12.0
150°-160°	573.7	9.7
160°-170°	369.7	6.2
170°-180°	127.2	2.1
0°-30°	699.6	11.8
0°-40°	1086.3	18.3
0°-60°	1720.9	29.0
0°-90°	2022.4	34.0
90°-120°	644.2	10.8
90°-150°	2848.4	47.9
90°-180°	3919.0	66.0
0°-180°	5941.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	982	982	982	982	982	
5°	982	978	966	974	972	93
15°	934	924	894	877	868	263
25°	848	820	761	724	711	390
35°	731	685	607	551	532	457
45°	597	538	444	381	360	461
55°	454	385	289	236	219	406
65°	307	235	155	124	122	304
75°	164	101	71	65	64	173
85°	38	20	17	17	17	44
90°	1	12	19	24	26	6
95°	63	31	38	43	42	74
105°	294	323	59	70	74	314
115°	556	573	597	149	79	548
125°	786	799	817	824	827	701
135°	973	989	997	1007	1005	752
145°	1129	1128	1144	1151	1146	706
155°	1243	1234	1246	1252	1244	573
165°	1310	1304	1307	1314	1307	370
175°	1340	1333	1335	1342	1332	127
180°	1337	1337	1337	1337	1337	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	982.2	982.2	982.2	982.2	982.2
2.5°	986.7	982.2	972.4	981.4	979.6
5°	982.2	977.8	966.2	974.2	971.5
7.5°	974.2	968.9	956.5	960.0	955.5
10°	963.5	957.4	939.6	936.8	931.6
12.5°	950.2	942.2	918.2	912.9	903.1
15°	934.2	924.4	894.2	877.3	868.5
17.5°	915.5	901.3	864.0	844.5	830.2
20°	894.2	876.4	831.9	809.8	790.2
22.5°	871.2	850.6	799.1	768.9	755.6
25°	848.0	819.5	760.9	724.4	711.1
27.5°	820.5	790.2	725.3	683.6	663.1
30°	791.2	757.3	686.2	641.0	616.9
32.5°	762.6	721.8	649.0	595.6	573.3
35°	730.7	685.3	607.1	551.1	531.6
37.5°	699.6	650.6	568.0	506.6	484.5
40°	666.7	613.4	527.1	464.0	440.9
42.5°	632.9	576.1	486.2	420.4	398.2
45°	597.4	537.7	444.5	381.3	360.0
47.5°	563.6	500.5	404.5	341.3	321.8
50°	526.2	463.1	365.4	304.0	285.3
52.5°	489.7	423.1	328.0	269.3	252.5
55°	454.2	384.8	288.8	235.6	218.7
57.5°	417.8	346.7	254.3	204.5	190.2
60°	380.4	309.3	217.8	172.5	158.3
62.5°	344.0	272.9	186.6	144.0	137.0
65°	306.7	234.6	154.6	124.5	121.8
67.5°	271.2	199.1	124.5	109.3	106.6
70°	233.8	164.5	103.1	94.2	90.6
72.5°	198.2	132.4	86.2	79.1	77.3
75°	163.5	101.3	71.1	64.9	64.0
77.5°	128.9	71.9	56.0	52.4	50.6
80°	96.9	51.6	42.6	39.1	39.1
82.5°	67.5	34.7	29.3	27.6	27.6
85°	38.2	19.5	16.9	16.9	16.9
87.5°	14.3	7.1	7.1	6.3	6.3
90°	1.0	11.6	19.3	24.2	26.1
92.5°	24.2	20.4	23.2	25.2	26.1
95°	62.8	30.9	37.7	42.6	41.6
97.5°	113.1	33.9	49.3	52.3	53.2
100°	171.3	38.7	55.1	62.8	64.8
102.5°	235.0	233.1	57.1	67.7	70.7
105°	294.1	323.1	59.0	69.6	73.5
107.5°	362.7	386.8	61.0	71.5	75.5
110°	428.6	448.8	169.3	72.6	76.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	490.4	507.8	491.4	74.5	77.4
115°	556.2	572.6	596.8	149.0	79.4
117.5°	613.2	632.6	649.1	510.6	257.3
120°	677.1	691.6	709.0	720.6	590.0
122.5°	731.2	746.7	766.1	771.9	772.9
125°	786.3	799.0	817.4	824.1	827.0
127.5°	836.6	850.2	864.8	874.4	875.4
130°	884.1	899.6	910.1	920.8	920.0
132.5°	932.5	945.1	955.6	964.4	963.5
135°	973.1	988.6	997.2	1007.0	1005.0
137.5°	1015.6	1027.2	1037.0	1046.6	1043.8
140°	1057.2	1065.0	1075.5	1084.3	1079.5
142.5°	1092.1	1098.9	1111.4	1119.1	1114.3
145°	1128.9	1127.8	1144.2	1151.0	1146.2
147.5°	1160.7	1157.8	1174.3	1179.1	1175.3
150°	1191.7	1184.9	1200.4	1206.2	1201.3
152.5°	1217.7	1210.1	1224.6	1230.4	1223.6
155°	1242.9	1234.3	1245.9	1251.6	1244.0
157.5°	1263.2	1255.5	1264.2	1271.1	1263.2
160°	1280.7	1274.9	1280.7	1286.4	1279.7
162.5°	1296.1	1290.4	1295.1	1301.9	1293.2
165°	1309.6	1303.9	1306.8	1313.5	1306.8
167.5°	1320.3	1314.5	1317.5	1324.2	1315.5
170°	1329.0	1323.2	1325.2	1331.9	1323.2
172.5°	1334.8	1329.0	1331.0	1337.8	1329.0
175°	1339.7	1332.8	1334.8	1341.6	1331.9
177.5°	1341.6	1334.8	1335.9	1342.6	1333.9
180°	1336.7	1336.7	1336.7	1336.7	1336.7

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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	5.88	6.60	6.97	7.68	9.17	1.85	2.57	2.94	3.65	5.13
	3H	7.55	8.19	8.64	9.28	10.78	3.02	3.66	4.12	4.75	6.26
	4H	8.15	8.75	9.25	9.84	11.35	3.46	4.07	4.57	5.16	6.67
	6H	8.56	9.11	9.67	10.21	11.73	3.77	4.33	4.89	5.43	6.95
	8H	8.68	9.21	9.80	10.32	11.83	3.86	4.39	4.98	5.50	7.01
	12H	8.73	9.23	9.86	10.34	11.88	3.89	4.40	5.02	5.50	7.04
4H	2H	5.89	6.49	7.00	7.59	9.09	2.43	3.03	3.54	4.13	5.63
	3H	7.70	8.20	8.82	9.32	10.84	3.76	4.26	4.88	5.38	6.90
	4H	8.38	8.84	9.51	9.95	11.49	4.30	4.76	5.42	5.87	7.41
	6H	8.88	9.28	10.01	10.41	11.95	4.70	5.10	5.84	6.23	7.77
	8H	9.05	9.42	10.18	10.55	12.10	4.83	5.20	5.96	6.32	7.87
	12H	9.14	9.47	10.29	10.61	12.16	4.88	5.22	6.03	6.36	7.91
8H	4H	8.34	8.71	9.47	9.83	11.38	4.57	4.94	5.70	6.06	7.61
	6H	8.89	9.20	10.04	10.36	11.91	5.07	5.38	6.22	6.54	8.09
	8H	9.11	9.37	10.26	10.52	12.08	5.26	5.52	6.42	6.67	8.24
	12H	9.23	9.47	10.39	10.61	12.21	5.37	5.60	6.53	6.74	8.35
12H	4H	8.28	8.62	9.43	9.76	11.31	4.56	4.90	5.71	6.04	7.59
	6H	8.87	9.13	10.03	10.28	11.85	5.12	5.38	6.28	6.53	8.10
	8H	9.08	9.31	10.24	10.46	12.06	5.32	5.55	6.48	6.70	8.30

END OF REPORT