

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: P913983

Luminaire Tested: DFN2DIP-PN3F0-070D050US927-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P913983
REPORT IS A COMBINATION OF REPORTS P901068 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-070D050US927-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

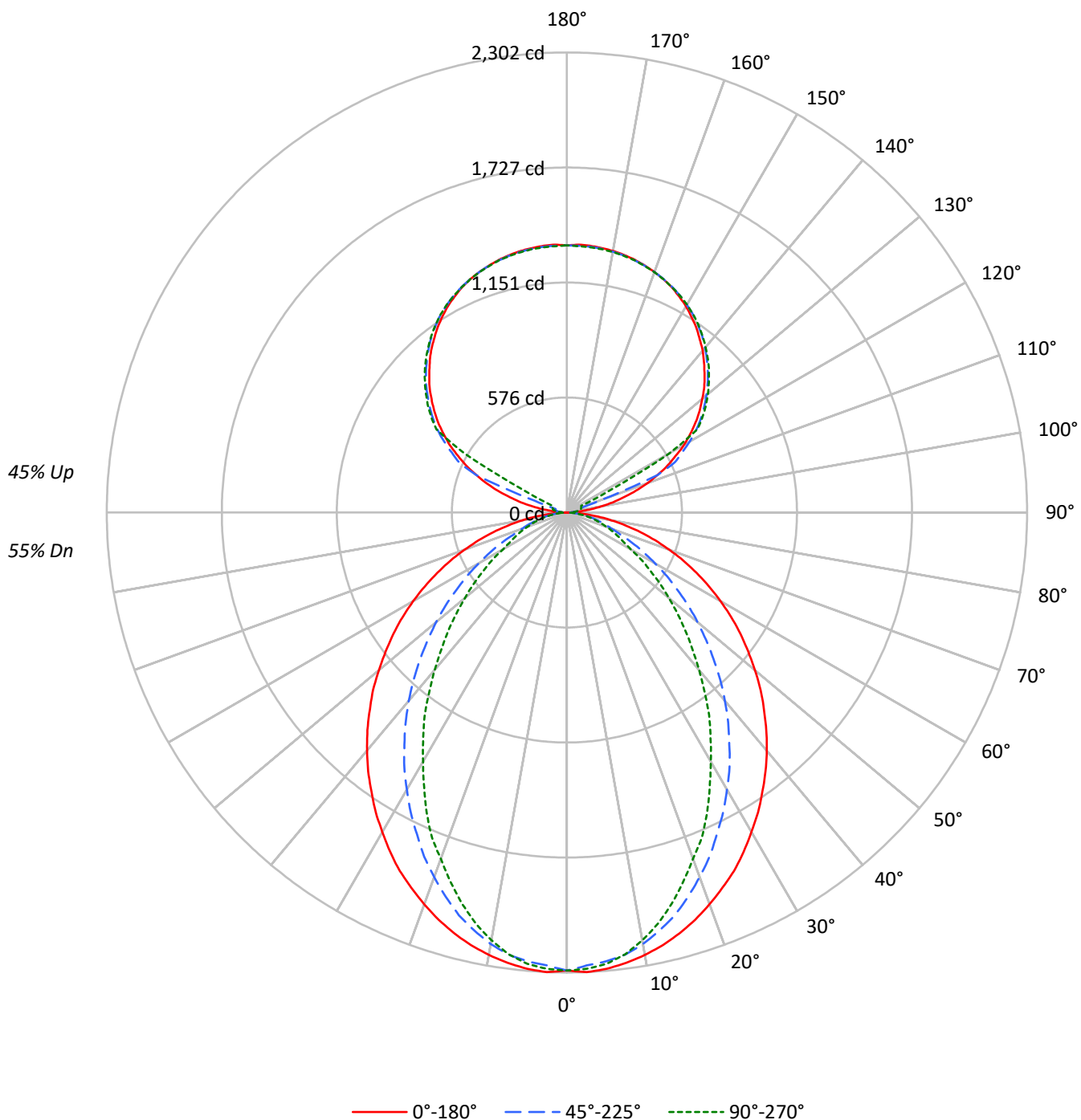
Lumens per Lamp: N/A
Luminaire Lumens: 8634.8 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 107.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLLONL

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	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	54	53	52
2	91	84	78	73	84	78	73	69	67	63	60	57	55	52	48	46	45
3	83	74	67	61	77	69	63	58	60	55	51	51	48	45	43	41	39
4	76	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34
5	70	59	51	45	65	55	48	43	48	43	38	42	37	34	35	32	30
6	65	53	45	40	60	50	43	38	44	38	34	38	33	30	32	29	26
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24
8	56	44	36	31	52	41	34	30	36	31	27	32	27	24	27	24	21
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	25	22	19
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2679	2679	2679
5°	2682	2635	2652
10°	2654	2581	2565
15°	2616	2494	2431
20°	2566	2375	2266
25°	2515	2241	2107
30°	2446	2105	1906
35°	2379	1958	1729
40°	2311	1806	1527
45°	2232	1638	1343
50°	2151	1469	1164
55°	2065	1288	992
60°	1966	1099	815
65°	1852	908	733
70°	1713	729	661
75°	1539	638	599
80°	1287	530	516
85°	874	345	381

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2232 cd/sqm

TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	2.5
10°-20°	589.7	6.8
20°-30°	827.9	9.6
30°-40°	902.4	10.5
40°-50°	829.4	9.6
50°-60°	651.4	7.5
60°-70°	424.0	4.9
70°-80°	218.2	2.5
80°-90°	58.1	0.7
90°-100°	44.1	0.5
100°-110°	164.3	1.9
110°-120°	435.8	5.0
120°-130°	722.8	8.4
130°-140°	767.8	8.9
140°-150°	713.6	8.3
150°-160°	573.7	6.6
160°-170°	369.7	4.3
170°-180°	127.2	1.5
0°-30°	1632.3	18.9
0°-40°	2534.7	29.4
0°-60°	4015.5	46.5
0°-90°	4715.8	54.6
90°-120°	644.2	7.5
90°-150°	2848.4	33.0
90°-180°	3919.0	45.4
0°-180°	8634.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2292	2292	2292	2292	2292	
5°	2292	2282	2254	2273	2267	217
15°	2180	2157	2086	2047	2026	614
25°	1979	1912	1775	1690	1659	910
35°	1705	1599	1417	1286	1240	1067
45°	1394	1255	1037	890	840	1076
55°	1060	898	674	550	510	947
65°	716	548	361	290	284	709
75°	382	236	166	151	149	404
85°	89	46	39	39	39	102
90°	1	12	19	24	26	8
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	

TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2291.9	2291.9	2291.9	2291.9	2291.9
2.5°	2302.2	2291.9	2269.0	2289.9	2285.7
5°	2291.9	2281.5	2254.5	2273.2	2267.0
7.5°	2273.2	2260.8	2231.8	2239.9	2229.6
10°	2248.3	2233.8	2192.4	2186.0	2173.7
12.5°	2217.2	2198.5	2142.5	2130.1	2107.2
15°	2179.8	2157.0	2086.5	2047.2	2026.5
17.5°	2136.3	2103.1	2015.9	1970.3	1937.1
20°	2086.5	2044.9	1941.3	1889.6	1843.8
22.5°	2032.7	1984.9	1864.5	1794.1	1763.1
25°	1978.7	1912.2	1775.4	1690.4	1659.2
27.5°	1914.5	1843.8	1692.4	1595.0	1547.2
30°	1846.0	1767.0	1601.1	1495.5	1439.4
32.5°	1779.6	1684.1	1514.2	1389.6	1337.7
35°	1704.9	1599.1	1416.7	1286.0	1240.2
37.5°	1632.4	1518.1	1325.4	1182.1	1130.4
40°	1555.5	1431.2	1229.9	1082.7	1028.7
42.5°	1476.8	1344.1	1134.6	981.0	929.3
45°	1393.8	1254.7	1037.1	889.7	839.9
47.5°	1315.0	1167.8	943.8	796.4	750.8
50°	1227.9	1080.7	852.5	709.2	665.9
52.5°	1142.7	987.1	765.3	628.4	589.1
55°	1059.8	898.0	674.0	549.7	510.3
57.5°	974.9	808.9	593.3	477.1	443.9
60°	887.7	721.8	508.1	402.5	369.2
62.5°	802.7	636.8	435.5	336.0	319.5
65°	715.6	547.5	360.9	290.5	284.1
67.5°	632.6	464.5	290.5	255.0	248.9
70°	545.5	383.7	240.5	219.8	211.4
72.5°	462.6	309.0	201.1	184.7	180.5
75°	381.6	236.3	165.9	151.4	149.4
77.5°	300.8	167.9	130.7	122.3	118.2
80°	226.0	120.3	99.5	91.3	91.3
82.5°	157.6	81.0	68.4	64.2	64.2
85°	89.1	45.6	39.4	39.4	39.4
87.5°	33.2	16.5	16.5	14.5	14.5
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

TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLLONL

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

TEST NUMBER: P913983

CATALOG NUMBER: DFN2DIP-PN3F0-070D050US927-RLONL

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	10.95	11.82	11.88	12.76	13.97	6.92	7.79	7.84	8.73	9.93
	3H	12.63	13.40	13.56	14.35	15.58	8.10	8.88	9.04	9.83	11.06
	4H	13.23	13.97	14.18	14.92	16.16	8.55	9.29	9.50	10.24	11.48
	6H	13.65	14.33	14.61	15.28	16.54	8.87	9.55	9.83	10.50	11.76
	8H	13.78	14.42	14.75	15.39	16.64	8.96	9.60	9.93	10.58	11.83
	12H	13.84	14.45	14.81	15.42	16.69	9.00	9.61	9.97	10.58	11.85
4H	2H	10.97	11.71	11.93	12.66	13.90	7.52	8.25	8.47	9.20	10.44
	3H	12.80	13.41	13.77	14.39	15.64	8.86	9.47	9.83	10.45	11.71
	4H	13.49	14.05	14.46	15.02	16.30	9.41	9.96	10.38	10.94	12.22
	6H	14.00	14.48	14.99	15.48	16.75	9.82	10.30	10.81	11.30	12.58
	8H	14.17	14.62	15.16	15.61	16.90	9.95	10.40	10.94	11.39	12.68
	12H	14.27	14.67	15.27	15.68	16.97	10.01	10.41	11.02	11.42	12.72
8H	4H	13.46	13.91	14.45	14.90	16.19	9.69	10.13	10.67	11.13	12.42
	6H	14.02	14.39	15.03	15.42	16.71	10.20	10.57	11.21	11.60	12.89
	8H	14.23	14.56	15.25	15.58	16.89	10.38	10.71	11.41	11.73	13.04
	12H	14.37	14.65	15.39	15.67	17.02	10.50	10.79	11.52	11.80	13.15
12H	4H	13.41	13.81	14.42	14.82	16.12	9.69	10.10	10.70	11.10	12.40
	6H	13.99	14.32	15.02	15.34	16.65	10.25	10.57	11.27	11.59	12.90
	8H	14.21	14.50	15.24	15.51	16.87	10.45	10.74	11.48	11.75	13.11

END OF REPORT