

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: P924875

Luminaire Tested: DFN2DIP-PN3F0-060D070US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P924875
REPORT IS A COMBINATION OF REPORTS P901094 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-060D070US950-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

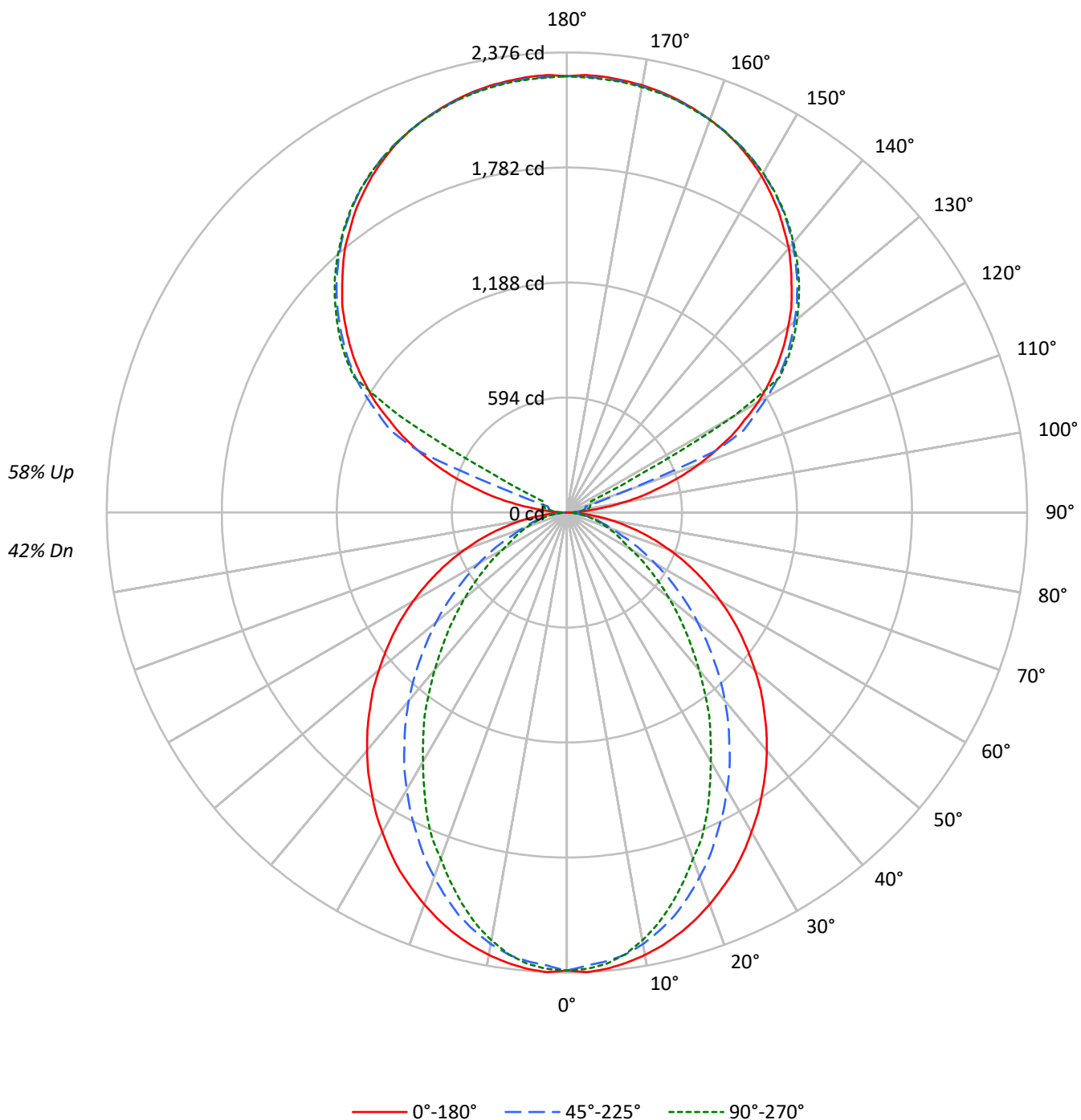
Lumens per Lamp: N/A
Luminaire Lumens: 11476.6 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 111.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9821
Total Harmonic Distortion (THDi): 0.08
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49
1	96	92	89	85	88	85	81	79	70	68	66	56	55	54	44	43	42
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	39	38	36
3	81	72	65	59	74	66	60	55	55	50	47	45	42	39	35	33	31
4	74	64	56	50	67	59	52	47	49	44	40	40	36	34	32	29	27
5	68	57	49	43	62	52	46	40	44	39	35	36	32	29	29	26	24
6	63	51	43	38	57	47	40	35	40	34	31	33	29	26	26	23	21
7	58	46	39	33	53	43	36	31	36	31	27	30	26	23	24	21	19
8	54	42	35	29	49	39	32	28	33	28	24	27	24	21	22	19	17
9	50	38	31	26	46	36	29	25	30	25	22	25	21	19	21	18	16
10	47	35	28	24	43	33	26	22	28	23	20	23	20	17	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2765	2765	2765
5°	2768	2720	2738
10°	2739	2664	2648
15°	2700	2574	2509
20°	2648	2451	2339
25°	2596	2313	2175
30°	2525	2172	1967
35°	2456	2021	1785
40°	2386	1864	1576
45°	2304	1691	1386
50°	2220	1516	1202
55°	2132	1330	1024
60°	2029	1135	842
65°	1912	937	756
70°	1768	752	683
75°	1589	659	619
80°	1328	547	533
85°	902	355	393

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2304 cd/sqm

TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.7	1.9
10°-20°	608.7	5.3
20°-30°	854.5	7.4
30°-40°	931.5	8.1
40°-50°	856.2	7.5
50°-60°	672.4	5.9
60°-70°	437.7	3.8
70°-80°	225.3	2.0
80°-90°	61.5	0.5
90°-100°	74.3	0.6
100°-110°	277.0	2.4
110°-120°	734.8	6.4
120°-130°	1218.6	10.6
130°-140°	1294.5	11.3
140°-150°	1203.1	10.5
150°-160°	967.2	8.4
160°-170°	623.3	5.4
170°-180°	214.5	1.9
0°-30°	1684.9	14.7
0°-40°	2616.4	22.8
0°-60°	4144.9	36.1
0°-90°	4869.4	42.4
90°-120°	1086.1	9.5
90°-150°	4802.2	41.8
90°-180°	6607.0	57.6
0°-180°	11476.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2366	2366	2366	2366	2366	
5°	2366	2355	2327	2346	2340	224
15°	2250	2226	2154	2113	2092	634
25°	2042	1974	1833	1745	1713	939
35°	1760	1651	1462	1327	1280	1102
45°	1439	1295	1071	918	867	1111
55°	1094	927	696	567	527	978
65°	739	565	372	300	293	732
75°	394	244	171	156	154	417
85°	92	47	41	41	41	106
90°	2	20	32	41	44	11
95°	106	52	64	72	70	125
105°	496	545	100	117	124	530
115°	938	965	1006	251	134	923
125°	1326	1347	1378	1390	1394	1182
135°	1641	1667	1681	1698	1694	1267
145°	1903	1902	1929	1941	1932	1190
155°	2096	2081	2100	2110	2097	966
165°	2208	2198	2203	2215	2203	624
175°	2259	2247	2250	2262	2246	215
180°	2254	2254	2254	2254	2254	

TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2365.7	2365.7	2365.7	2365.7	2365.7
2.5°	2376.4	2365.7	2342.1	2363.6	2359.3
5°	2365.7	2355.0	2327.1	2346.5	2340.1
7.5°	2346.5	2333.7	2303.7	2312.1	2301.4
10°	2320.7	2305.7	2263.1	2256.5	2243.7
12.5°	2288.7	2269.4	2211.5	2198.8	2175.1
15°	2250.1	2226.4	2153.8	2113.1	2091.7
17.5°	2205.2	2170.8	2080.9	2033.8	1999.6
20°	2153.8	2110.8	2003.9	1950.5	1903.2
22.5°	2098.1	2048.8	1924.6	1851.9	1819.9
25°	2042.5	1973.9	1832.6	1745.0	1712.7
27.5°	1976.2	1903.2	1747.0	1646.3	1597.1
30°	1905.5	1824.0	1652.7	1543.7	1485.8
32.5°	1836.9	1738.4	1563.0	1434.4	1380.8
35°	1759.9	1650.7	1462.4	1327.4	1280.2
37.5°	1685.0	1567.0	1368.1	1220.3	1166.8
40°	1605.7	1477.4	1269.5	1117.5	1061.9
42.5°	1524.4	1387.4	1171.1	1012.6	959.2
45°	1438.7	1295.2	1070.6	918.3	867.0
47.5°	1357.4	1205.5	974.2	822.1	775.0
50°	1267.5	1115.5	880.0	732.1	687.4
52.5°	1179.5	1019.0	790.0	648.7	608.1
55°	1094.0	927.0	695.8	567.4	526.7
57.5°	1006.3	834.9	612.4	492.5	458.1
60°	916.3	745.1	524.5	415.5	381.1
62.5°	828.6	657.4	449.5	346.9	329.8
65°	738.7	565.1	372.5	299.8	293.3
67.5°	653.0	479.5	299.8	263.3	256.9
70°	563.1	396.1	248.2	227.0	218.3
72.5°	477.5	318.9	207.6	190.6	186.2
75°	393.9	243.9	171.2	156.3	154.3
77.5°	310.5	173.3	134.9	126.3	122.0
80°	233.3	124.2	102.7	94.3	94.3
82.5°	162.7	83.6	70.6	66.3	66.3
85°	92.0	47.0	40.6	40.6	40.6
87.5°	34.3	17.1	17.1	15.0	15.0
90°	1.5	19.6	32.5	40.8	44.0
92.5°	40.8	34.2	39.1	42.5	44.0
95°	105.9	52.1	63.5	71.8	70.1
97.5°	190.7	57.1	83.1	88.1	89.7
100°	288.8	65.3	92.9	105.9	109.2
102.5°	396.2	393.1	96.3	114.1	119.1
105°	495.8	544.7	99.5	117.3	123.9
107.5°	611.5	652.2	102.8	120.7	127.3
110°	722.6	756.6	285.4	122.4	128.8

TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	826.9	856.1	828.5	125.5	130.5
115°	937.7	965.4	1006.2	251.2	133.8
117.5°	1033.9	1066.5	1094.3	861.0	433.8
120°	1141.6	1166.0	1195.5	1215.0	994.8
122.5°	1232.8	1258.9	1291.7	1301.4	1303.1
125°	1325.8	1347.0	1378.1	1389.5	1394.3
127.5°	1410.6	1433.4	1458.0	1474.3	1475.8
130°	1490.5	1516.7	1534.5	1552.5	1551.0
132.5°	1572.1	1593.4	1611.2	1625.9	1624.4
135°	1640.6	1666.7	1681.3	1697.7	1694.5
137.5°	1712.2	1731.9	1748.3	1764.6	1759.7
140°	1782.4	1795.5	1813.4	1828.1	1819.9
142.5°	1841.2	1852.7	1873.8	1886.7	1878.6
145°	1903.2	1901.5	1929.2	1940.6	1932.5
147.5°	1956.8	1952.1	1979.7	1987.8	1981.5
150°	2009.1	1997.8	2023.9	2033.5	2025.4
152.5°	2053.1	2040.1	2064.6	2074.4	2063.0
155°	2095.6	2081.0	2100.5	2110.2	2097.3
157.5°	2129.8	2116.8	2131.5	2143.0	2129.8
160°	2159.3	2149.4	2159.3	2168.9	2157.5
162.5°	2185.2	2175.5	2183.6	2195.1	2180.4
165°	2208.0	2198.4	2203.2	2214.6	2203.2
167.5°	2226.1	2216.1	2221.2	2232.6	2218.0
170°	2240.8	2230.9	2234.2	2245.6	2230.9
172.5°	2250.5	2240.8	2244.1	2255.4	2240.8
175°	2258.6	2247.1	2250.5	2261.8	2245.6
177.5°	2261.8	2250.5	2252.2	2263.7	2248.9
180°	2253.7	2253.7	2253.7	2253.7	2253.7

TEST NUMBER: P924875

CATALOG NUMBER: DFN2DIP-PN3F0-060D070US950-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	9.89	10.66	10.92	11.69	13.07	5.86	6.63	6.88	7.66	9.04
	3H	11.56	12.25	12.59	13.29	14.69	7.04	7.73	8.07	8.77	10.16
	4H	12.16	12.81	13.21	13.85	15.26	7.48	8.13	8.53	9.17	10.58
	6H	12.57	13.18	13.63	14.22	15.64	7.79	8.39	8.85	9.44	10.86
	8H	12.70	13.27	13.76	14.33	15.74	7.88	8.45	8.94	9.51	10.92
	12H	12.75	13.30	13.82	14.35	15.79	7.92	8.46	8.98	9.52	10.95
4H	2H	9.90	10.55	10.96	11.60	13.00	6.44	7.10	7.50	8.14	9.54
	3H	11.72	12.26	12.78	13.33	14.75	7.78	8.32	8.84	9.39	10.81
	4H	12.40	12.90	13.47	13.96	15.40	8.32	8.82	9.39	9.88	11.32
	6H	12.91	13.34	13.99	14.42	15.85	8.73	9.16	9.81	10.24	11.68
	8H	13.08	13.48	14.16	14.55	16.00	8.86	9.25	9.93	10.33	11.78
	12H	13.17	13.53	14.26	14.62	16.07	8.91	9.27	10.01	10.36	11.82
8H	4H	12.37	12.76	13.44	13.84	15.29	8.59	8.99	9.67	10.07	11.52
	6H	12.92	13.25	14.02	14.37	15.82	9.10	9.43	10.20	10.55	12.00
	8H	13.13	13.42	14.24	14.52	15.99	9.29	9.58	10.40	10.68	12.14
	12H	13.27	13.52	14.38	14.62	16.12	9.40	9.65	10.51	10.75	12.25
12H	4H	12.31	12.67	13.41	13.76	15.22	8.60	8.96	9.69	10.04	11.50
	6H	12.90	13.19	14.00	14.29	15.75	9.15	9.44	10.26	10.54	12.00
	8H	13.11	13.36	14.22	14.46	15.97	9.35	9.61	10.46	10.70	12.21

END OF REPORT