

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: P926279

Luminaire Tested: DFN2DIP-TR3F0-060D070US950-FLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926279
REPORT IS A COMBINATION OF REPORTS P901853 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-060D070US950-FLLONL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

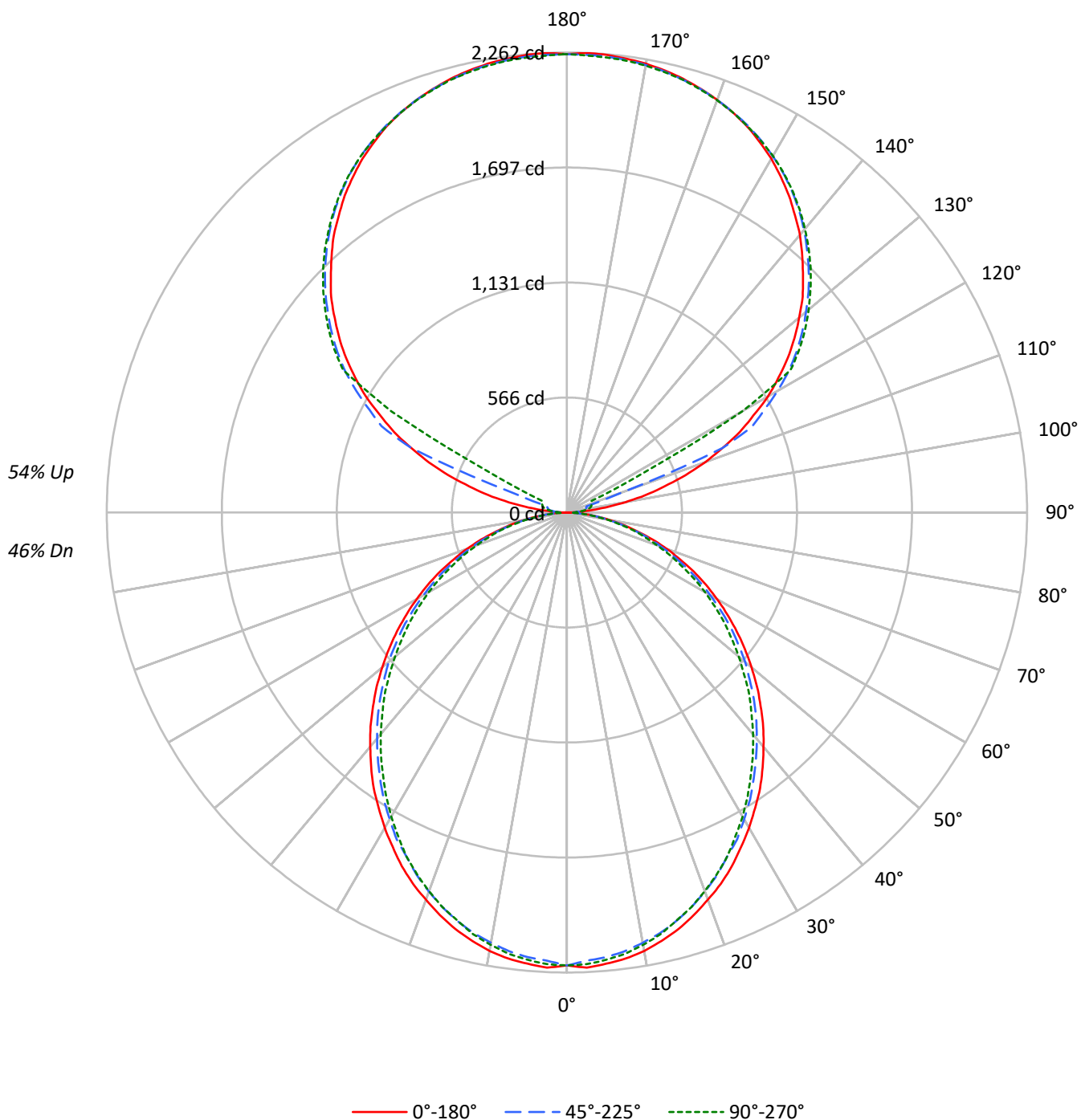
Lumens per Lamp: N/A
Luminaire Lumens: 12278.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 110.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P926279

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLONL

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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53
1	97	93	89	85	89	85	82	79	71	69	67	58	57	55	46	45	44
2	88	81	75	70	81	74	69	65	62	59	55	51	48	46	41	39	37
3	81	71	64	58	74	66	59	54	55	50	46	45	42	39	36	34	32
4	74	63	55	49	67	58	51	46	49	44	40	40	37	33	32	30	27
5	68	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24
6	62	50	42	36	57	46	39	34	39	34	30	33	29	25	26	23	21
7	58	45	37	32	53	42	35	30	36	30	26	30	26	22	24	21	19
8	53	41	33	28	49	38	31	26	33	27	23	27	23	20	22	19	17
9	50	38	30	25	46	35	28	24	30	24	21	25	21	18	21	17	15
10	46	34	27	22	43	32	26	21	27	22	19	23	19	16	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2775	2775	2775
5°	2778	2734	2753
10°	2754	2695	2714
15°	2712	2648	2654
20°	2656	2584	2593
25°	2600	2508	2522
30°	2530	2437	2432
35°	2464	2354	2338
40°	2382	2270	2248
45°	2301	2185	2156
50°	2212	2097	2049
55°	2119	1994	1950
60°	2014	1872	1837
65°	1898	1746	1704
70°	1752	1591	1560
75°	1549	1406	1425
80°	1304	1170	1171
85°	921	770	756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2301 cd/sqm

TEST NUMBER: P926279

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.6	1.7
10°-20°	589.8	4.8
20°-30°	866.8	7.1
30°-40°	1006.7	8.2
40°-50°	1005.5	8.2
50°-60°	876.7	7.1
60°-70°	648.1	5.3
70°-80°	366.7	3.0
80°-90°	100.8	0.8
90°-100°	74.3	0.6
100°-110°	277.0	2.3
110°-120°	734.8	6.0
120°-130°	1218.6	9.9
130°-140°	1294.5	10.5
140°-150°	1203.1	9.8
150°-160°	967.2	7.9
160°-170°	623.3	5.1
170°-180°	214.5	1.7
0°-30°	1666.2	13.6
0°-40°	2673.0	21.8
0°-60°	4555.2	37.1
0°-90°	5670.7	46.2
90°-120°	1086.1	8.8
90°-150°	4802.2	39.1
90°-180°	6607.0	53.8
0°-180°	12278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2227	2219	2195	2212	2208	211
15°	2120	2108	2080	2088	2078	597
25°	1919	1902	1866	1870	1866	883
35°	1656	1634	1600	1587	1576	1034
45°	1347	1332	1300	1276	1268	1040
55°	1020	1007	981	955	945	912
65°	688	675	653	634	623	680
75°	360	356	345	332	336	384
85°	88	86	84	77	75	98
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: P926279

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2227.2	2227.2	2227.2	2227.2	2227.2
2.5°	2240.2	2229.5	2205.8	2227.2	2223.1
5°	2227.2	2218.8	2195.2	2212.2	2208.1
7.5°	2212.2	2199.5	2175.9	2193.2	2188.9
10°	2188.9	2173.9	2148.1	2165.2	2158.8
12.5°	2156.6	2143.8	2118.2	2128.9	2124.6
15°	2120.2	2107.5	2079.5	2088.2	2077.5
17.5°	2075.2	2062.5	2034.6	2045.2	2034.6
20°	2025.9	2013.2	1983.2	1989.6	1981.2
22.5°	1976.9	1957.5	1929.6	1929.6	1925.3
25°	1918.9	1901.9	1865.5	1869.6	1865.5
27.5°	1854.6	1839.6	1811.8	1805.5	1794.9
30°	1790.6	1773.2	1741.2	1734.8	1726.2
32.5°	1721.9	1709.2	1674.8	1661.9	1653.3
35°	1655.6	1634.2	1599.9	1586.9	1576.2
37.5°	1580.6	1561.2	1527.0	1511.9	1501.2
40°	1503.5	1486.2	1452.0	1432.9	1424.2
42.5°	1428.5	1411.3	1377.2	1355.6	1342.9
45°	1347.2	1332.2	1299.9	1276.5	1267.9
47.5°	1267.9	1252.9	1218.6	1195.0	1182.2
50°	1184.3	1173.6	1143.7	1113.6	1102.9
52.5°	1102.9	1087.9	1060.2	1036.6	1021.6
55°	1019.5	1006.6	980.9	955.2	944.6
57.5°	936.0	925.3	897.3	871.7	863.0
60°	852.3	843.9	814.0	790.3	783.9
62.5°	770.9	755.9	734.6	713.2	704.6
65°	687.5	674.7	653.3	633.9	623.2
67.5°	601.9	591.0	571.9	556.9	548.3
70°	522.6	514.0	494.6	479.7	471.3
72.5°	441.2	432.6	422.0	407.0	400.6
75°	359.7	355.7	344.7	332.0	336.3
77.5°	287.0	278.4	274.0	267.7	261.3
80°	214.3	212.0	207.7	201.3	197.0
82.5°	145.7	145.7	143.6	135.0	135.0
85°	87.7	85.7	83.6	77.0	75.0
87.5°	38.6	34.3	30.0	23.7	21.4
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: P926279

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLONL

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

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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	10.40	11.23	11.39	12.23	13.56	9.98	10.80	10.96	11.80	13.13
	3H	12.05	12.79	13.05	13.80	15.15	11.58	12.33	12.58	13.34	14.68
	4H	12.63	13.34	13.64	14.35	15.70	12.16	12.87	13.18	13.88	15.23
	6H	13.02	13.67	14.05	14.69	16.05	12.55	13.20	13.58	14.22	15.59
	8H	13.12	13.74	14.15	14.77	16.14	12.65	13.27	13.68	14.31	15.67
	12H	13.17	13.75	14.20	14.78	16.17	12.69	13.28	13.73	14.31	15.69
4H	2H	10.86	11.56	11.88	12.57	13.93	10.52	11.22	11.53	12.23	13.59
	3H	12.71	13.30	13.74	14.34	15.71	12.32	12.91	13.35	13.95	15.32
	4H	13.42	13.95	14.45	14.99	16.38	13.01	13.55	14.05	14.59	15.98
	6H	13.92	14.38	14.97	15.44	16.83	13.52	13.98	14.56	15.04	16.42
	8H	14.06	14.50	15.11	15.55	16.95	13.66	14.09	14.70	15.14	16.54
	12H	14.13	14.52	15.20	15.59	16.99	13.72	14.11	14.78	15.17	16.58
8H	4H	13.61	14.04	14.65	15.09	16.49	13.25	13.68	14.29	14.73	16.13
	6H	14.22	14.58	15.29	15.67	17.07	13.87	14.22	14.94	15.31	16.71
	8H	14.44	14.75	15.52	15.83	17.25	14.07	14.39	15.15	15.46	16.88
	12H	14.56	14.84	15.64	15.91	17.37	14.18	14.46	15.26	15.53	16.99
12H	4H	13.59	13.98	14.65	15.04	16.45	13.24	13.63	14.30	14.69	16.10
	6H	14.25	14.57	15.33	15.64	17.06	13.90	14.22	14.98	15.29	16.71
	8H	14.49	14.76	15.57	15.83	17.29	14.13	14.41	15.21	15.48	16.94

END OF REPORT