

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: P915398

Luminaire Tested: DFN2DIP-TR3F0-070D080US927-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915398
REPORT IS A COMBINATION OF REPORTS P900350 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-070D080US927-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

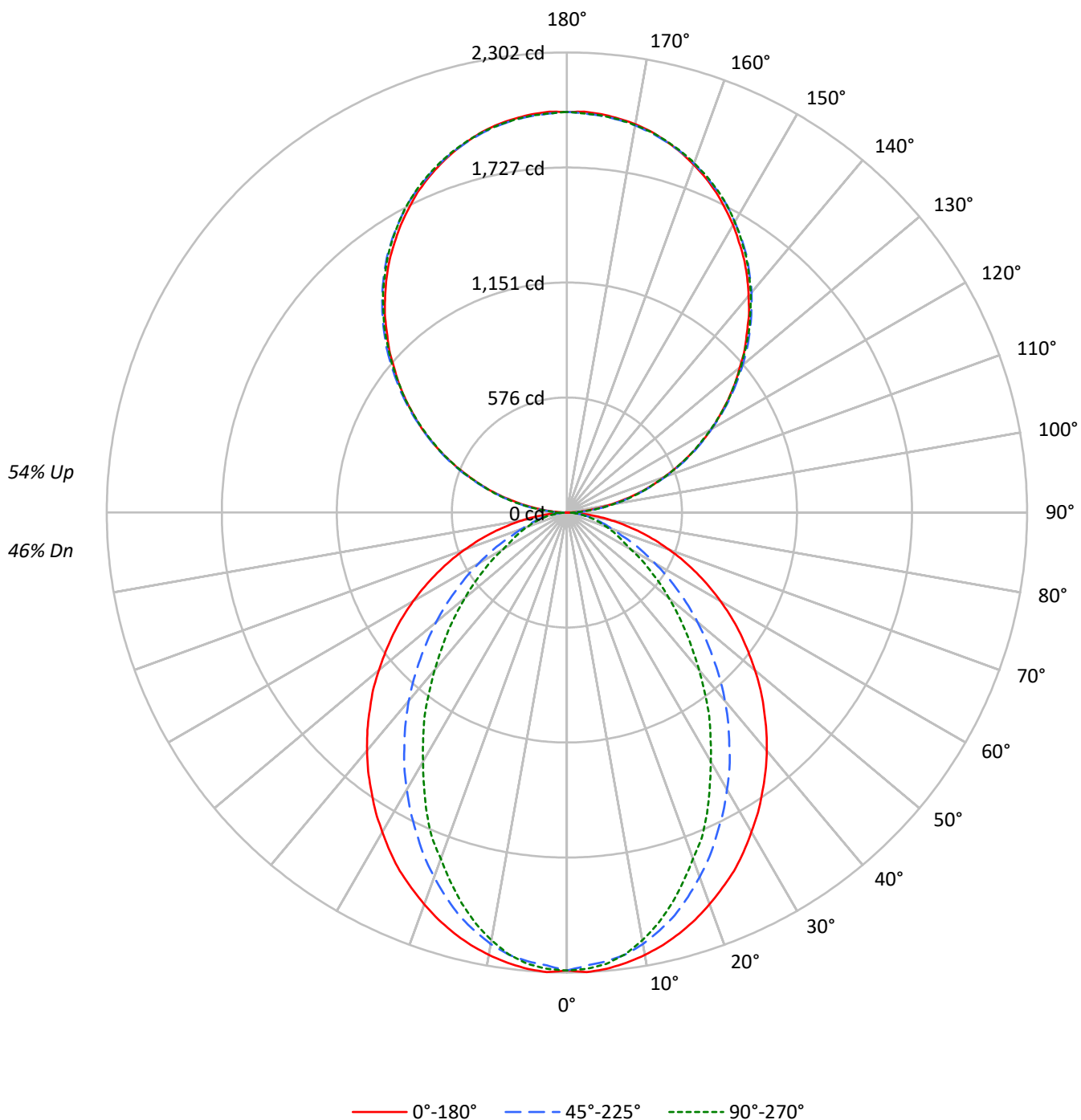
Lumens per Lamp: N/A
Luminaire Lumens: 10322.1 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 131.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P915398

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US927-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P915398

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US927-RLLFLL

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	97	97	97	97	81	81	81	66	66	66	52	52	52
1	97	93	89	86	89	86	82	80	72	69	67	59	57	56	47	46	45
2	89	82	76	71	81	75	70	66	63	60	56	52	49	47	42	40	38
3	81	72	65	60	74	67	61	56	56	52	48	46	43	40	37	35	33
4	75	64	57	51	68	59	53	48	50	45	41	42	38	35	34	31	29
5	69	57	50	44	63	53	46	41	45	40	36	38	34	31	31	28	26
6	63	52	44	38	58	48	41	36	41	35	31	34	30	27	28	25	23
7	59	47	39	34	54	43	37	32	37	32	28	31	27	24	26	23	20
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	18
9	51	39	32	27	47	36	30	25	31	26	22	26	22	20	22	19	17
10	47	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2856	2856	2856
5°	2859	2808	2827
10°	2829	2751	2733
15°	2788	2657	2589
20°	2735	2530	2413
25°	2681	2387	2243
30°	2608	2241	2028
35°	2537	2085	1840
40°	2465	1923	1624
45°	2381	1744	1428
50°	2294	1563	1237
55°	2203	1370	1054
60°	2097	1169	865
65°	1976	964	777
70°	1828	774	700
75°	1643	677	633
80°	1375	561	543
85°	935	363	397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2381 cd/sqm

TEST NUMBER: P915398

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US927-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	2.1
10°-20°	589.7	5.7
20°-30°	827.9	8.0
30°-40°	902.4	8.7
40°-50°	829.4	8.0
50°-60°	651.4	6.3
60°-70°	424.0	4.1
70°-80°	218.2	2.1
80°-90°	61.4	0.6
90°-100°	124.0	1.2
100°-110°	394.1	3.8
110°-120°	674.4	6.5
120°-130°	886.9	8.6
130°-140°	995.5	9.6
140°-150°	976.2	9.5
150°-160°	818.9	7.9
160°-170°	543.1	5.3
170°-180°	189.8	1.8
0°-30°	1632.3	15.8
0°-40°	2534.7	24.6
0°-60°	4015.5	38.9
0°-90°	4719.1	45.7
90°-120°	1192.5	11.6
90°-150°	4051.1	39.2
90°-180°	5603.0	54.3
0°-180°	10322.1	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°	2	22	59	56	57	10
95°	88	105	108	108	105	98
105°	364	369	372	375	375	384
115°	677	686	683	682	677	669
125°	984	999	995	989	987	880
135°	1273	1292	1296	1294	1289	984
145°	1546	1558	1567	1569	1563	966
155°	1767	1772	1778	1786	1781	813
165°	1923	1921	1921	1933	1924	542
175°	2001	1996	1992	2004	1994	190
180°	2004	2004	2004	2004	2004	

TEST NUMBER: P915398

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US927-RLLFLL

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°	1.8	21.8	59.3	55.6	57.4
92.5°	37.5	50.8	52.6	54.3	54.3
95°	88.2	105.1	108.1	108.1	105.1
97.5°	146.9	162.6	169.2	169.2	169.2
100°	214.5	228.4	233.2	233.2	231.4
102.5°	285.8	296.1	302.7	304.5	302.7
105°	363.8	368.6	372.2	375.3	375.3
107.5°	441.1	448.4	448.4	449.6	441.1
110°	516.0	525.7	525.7	525.7	520.9

TEST NUMBER: P915398

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US927-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	597.0	607.3	605.5	600.6	597.0
115°	676.8	686.4	683.4	681.6	676.8
117.5°	755.9	769.2	760.7	755.9	751.1
120°	835.7	849.0	835.7	835.7	830.2
122.5°	908.2	925.1	916.6	911.8	908.2
125°	984.3	999.4	994.6	989.1	987.4
127.5°	1058.7	1077.4	1070.7	1063.5	1058.7
130°	1128.1	1149.9	1146.8	1143.3	1136.6
132.5°	1206.1	1223.0	1224.2	1215.8	1210.9
135°	1273.1	1291.9	1295.5	1293.7	1288.9
137.5°	1348.1	1363.2	1366.2	1365.0	1357.7
140°	1414.0	1429.0	1437.5	1437.5	1430.8
142.5°	1481.6	1496.7	1501.6	1503.4	1496.7
145°	1545.7	1557.7	1567.4	1569.2	1562.6
147.5°	1603.1	1618.2	1625.4	1628.5	1621.8
150°	1662.3	1672.5	1679.2	1684.7	1679.2
152.5°	1714.8	1725.1	1733.6	1740.3	1733.6
155°	1767.4	1772.3	1777.7	1786.1	1780.7
157.5°	1812.7	1816.4	1819.4	1831.4	1823.0
160°	1853.2	1856.9	1858.7	1868.9	1861.7
162.5°	1890.7	1890.7	1892.5	1904.0	1895.5
165°	1922.7	1920.9	1920.9	1933.0	1924.5
167.5°	1951.7	1946.3	1946.3	1958.4	1949.9
170°	1973.5	1968.6	1966.8	1978.9	1968.6
172.5°	1988.6	1983.8	1982.0	1994.0	1983.8
175°	2000.7	1995.8	1992.2	2004.3	1994.0
177.5°	2007.3	2002.5	1998.8	2009.1	1998.8
180°	2004.3	2004.3	2004.3	2004.3	2004.3

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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	10.33	11.12	11.33	12.13	13.46	6.30	7.10	7.30	8.11	9.44
	3H	11.99	12.70	13.00	13.72	15.07	7.48	8.20	8.49	9.21	10.56
	4H	12.59	13.27	13.61	14.28	15.65	7.93	8.60	8.95	9.62	10.98
	6H	13.00	13.62	14.04	14.65	16.02	8.24	8.86	9.28	9.89	11.26
	8H	13.13	13.71	14.16	14.75	16.12	8.33	8.92	9.37	9.96	11.33
	12H	13.18	13.74	14.22	14.77	16.17	8.37	8.93	9.41	9.96	11.36
4H	2H	10.34	11.01	11.37	12.03	13.39	6.89	7.56	7.92	8.58	9.94
	3H	12.15	12.71	13.19	13.76	15.14	8.23	8.79	9.27	9.84	11.21
	4H	12.84	13.35	13.88	14.39	15.79	8.77	9.28	9.81	10.32	11.72
	6H	13.34	13.78	14.40	14.84	16.24	9.18	9.62	10.24	10.68	12.08
	8H	13.51	13.92	14.57	14.98	16.38	9.31	9.72	10.36	10.77	12.18
	12H	13.60	13.97	14.67	15.04	16.45	9.37	9.74	10.44	10.81	12.22
8H	4H	12.80	13.21	13.86	14.27	15.67	9.04	9.45	10.10	10.51	11.92
	6H	13.36	13.69	14.43	14.79	16.20	9.55	9.89	10.63	10.99	12.39
	8H	13.57	13.86	14.65	14.94	16.37	9.74	10.04	10.82	11.12	12.54
	12H	13.70	13.96	14.78	15.03	16.50	9.85	10.11	10.94	11.19	12.65
12H	4H	12.75	13.12	13.82	14.19	15.60	9.04	9.42	10.12	10.48	11.90
	6H	13.33	13.63	14.42	14.71	16.13	9.60	9.90	10.68	10.98	12.40
	8H	13.54	13.81	14.63	14.88	16.35	9.80	10.06	10.89	11.14	12.61

END OF REPORT