

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: P915371

Luminaire Tested: DFN2DIP-TR3F0-060D080US927-FLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915371
REPORT IS A COMBINATION OF REPORTS P901867 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-060D080US927-FLLONL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

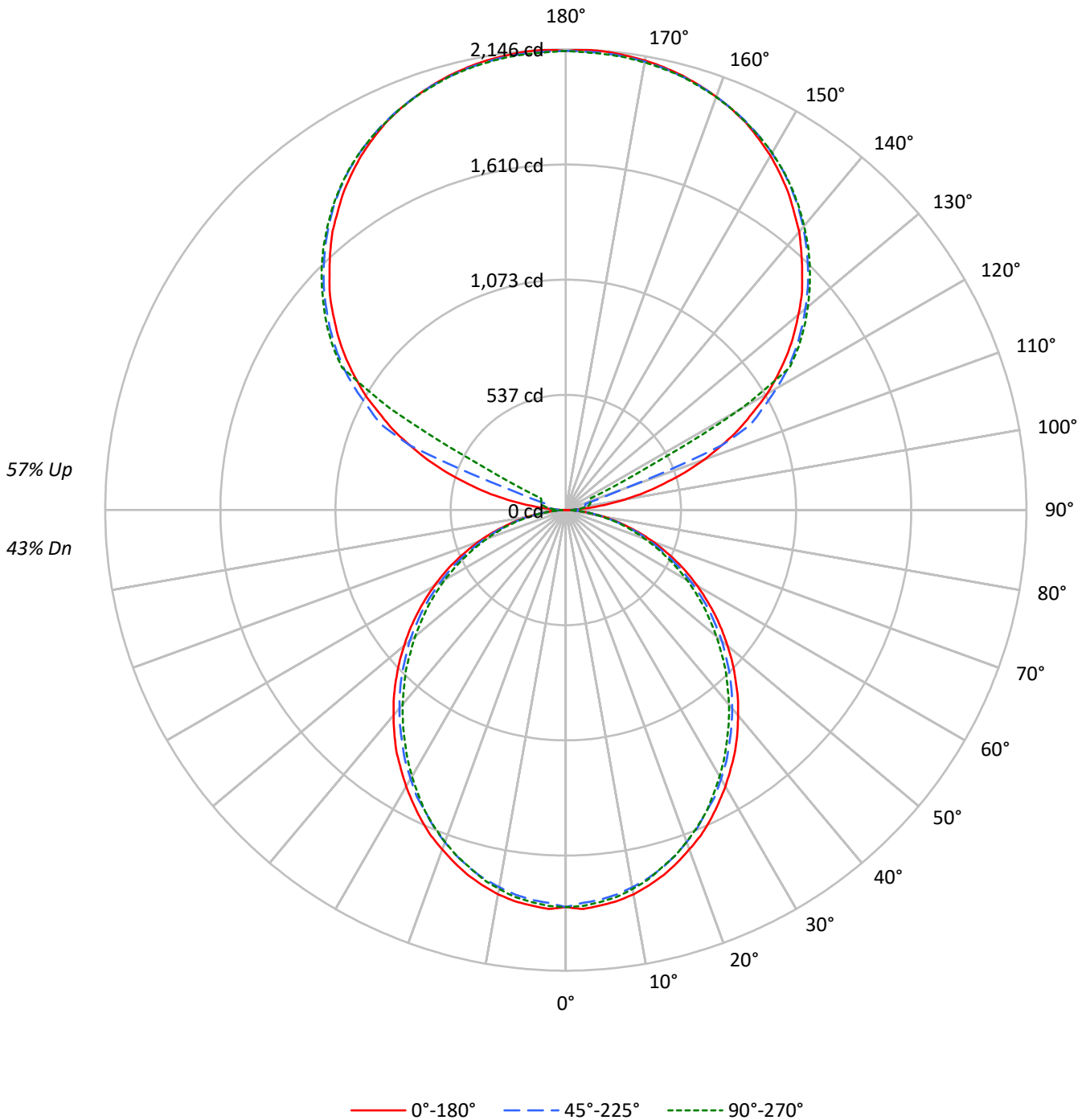
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10979.6 lumens
Efficiency: N/A
Efficacy: 92.7 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): 118.5
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: P915371
CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

Luminous Intensity Polar Plot





TEST NUMBER: P915371

CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				50				30				10				0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43				43
1	96	92	88	85	88	84	81	78	70	67	65	56	55	53	44	43	42	36				36
2	88	80	74	69	80	74	68	64	61	57	54	49	47	44	39	37	35	30				30
3	80	71	63	58	73	65	58	53	54	49	45	44	40	38	34	32	30	26				26
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	31	28	26	22				22
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	28	25	23	19				19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17				17
7	57	45	37	32	52	41	34	29	35	29	25	29	25	22	23	20	18	15				15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13				13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12				12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11				11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2305	2305	2305
5°	2307	2270	2286
10°	2287	2238	2254
15°	2252	2199	2204
20°	2205	2146	2153
25°	2159	2083	2094
30°	2101	2024	2020
35°	2046	1955	1941
40°	1978	1885	1866
45°	1911	1815	1790
50°	1837	1741	1701
55°	1760	1655	1619
60°	1672	1555	1526
65°	1576	1450	1415
70°	1455	1321	1296
75°	1286	1168	1183
80°	1082	972	972
85°	764	640	628

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1911 cd/sqm



TEST NUMBER: P915371

CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.1	1.6
10°-20°	489.8	4.5
20°-30°	719.8	6.6
30°-40°	836.0	7.6
40°-50°	834.9	7.6
50°-60°	728.0	6.6
60°-70°	538.2	4.9
70°-80°	304.5	2.8
80°-90°	84.1	0.8
90°-100°	70.5	0.6
100°-110°	262.9	2.4
110°-120°	697.3	6.4
120°-130°	1156.5	10.5
130°-140°	1228.4	11.2
140°-150°	1141.7	10.4
150°-160°	917.9	8.4
160°-170°	591.5	5.4
170°-180°	203.6	1.9
0°-30°	1383.6	12.6
0°-40°	2219.6	20.2
0°-60°	3782.5	34.5
0°-90°	4709.3	42.9
90°-120°	1030.7	9.4
90°-150°	4557.3	41.5
90°-180°	6270.0	57.1
0°-180°	10979.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1849	1849	1849	1849	1849	
5°	1849	1842	1823	1837	1834	176
15°	1760	1750	1727	1734	1725	496
25°	1593	1579	1549	1552	1549	733
35°	1375	1357	1328	1318	1309	858
45°	1119	1106	1079	1060	1053	863
55°	847	836	814	793	784	757
65°	571	560	542	526	518	564
75°	299	295	286	276	279	319
85°	73	71	69	64	62	81
90°	2	18	31	39	42	10
95°	100	49	60	68	66	119
105°	470	517	94	111	118	503
115°	890	916	955	238	127	876
125°	1258	1278	1308	1319	1323	1122
135°	1557	1582	1596	1611	1608	1203
145°	1806	1804	1831	1842	1834	1130
155°	1989	1975	1993	2003	1990	916
165°	2096	2086	2091	2102	2091	592
175°	2143	2133	2136	2146	2131	204
180°	2139	2139	2139	2139	2139	



TEST NUMBER: P915371

CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1849.4	1849.4	1849.4	1849.4	1849.4
2.5°	1860.2	1851.3	1831.7	1849.4	1846.0
5°	1849.4	1842.5	1822.8	1837.0	1833.6
7.5°	1837.0	1826.5	1806.8	1821.1	1817.6
10°	1817.6	1805.1	1783.8	1797.9	1792.6
12.5°	1790.8	1780.2	1758.9	1767.8	1764.2
15°	1760.5	1750.0	1726.8	1734.0	1725.1
17.5°	1723.2	1712.7	1689.5	1698.3	1689.5
20°	1682.3	1671.7	1646.8	1652.1	1645.1
22.5°	1641.6	1625.5	1602.3	1602.3	1598.7
25°	1593.4	1579.3	1549.0	1552.4	1549.0
27.5°	1540.0	1527.6	1504.5	1499.3	1490.4
30°	1486.8	1472.4	1445.9	1440.6	1433.4
32.5°	1429.8	1419.3	1390.8	1380.0	1372.8
35°	1374.8	1357.0	1328.5	1317.7	1308.8
37.5°	1312.5	1296.4	1268.0	1255.4	1246.6
40°	1248.5	1234.1	1205.7	1189.9	1182.6
42.5°	1186.2	1171.9	1143.6	1125.7	1115.1
45°	1118.7	1106.2	1079.4	1060.0	1052.8
47.5°	1052.8	1040.4	1011.9	992.3	981.7
50°	983.4	974.5	949.7	924.7	915.8
52.5°	915.8	903.4	880.4	860.8	848.3
55°	846.6	835.8	814.5	793.2	784.3
57.5°	777.2	768.3	745.1	723.8	716.6
60°	707.7	700.8	675.9	656.2	650.9
62.5°	640.2	627.7	610.0	592.2	585.1
65°	570.9	560.2	542.5	526.4	517.5
67.5°	499.8	490.8	474.9	462.5	455.3
70°	434.0	426.8	410.7	398.3	391.3
72.5°	366.4	359.3	350.4	337.9	332.6
75°	298.7	295.3	286.2	275.7	279.2
77.5°	238.3	231.2	227.5	222.3	217.0
80°	177.9	176.0	172.5	167.2	163.6
82.5°	121.0	121.0	119.2	112.1	112.1
85°	72.8	71.1	69.4	63.9	62.3
87.5°	32.1	28.5	24.9	19.6	17.7
90°	1.5	18.5	30.9	38.7	41.7
92.5°	38.7	32.6	37.2	40.2	41.7
95°	100.5	49.4	60.3	68.2	66.5
97.5°	181.0	54.2	78.8	83.7	85.1
100°	274.0	61.9	88.2	100.5	103.6
102.5°	376.0	373.0	91.3	108.2	113.0
105°	470.5	517.0	94.4	111.4	117.6
107.5°	580.4	618.9	97.6	114.5	120.7
110°	685.7	718.0	270.9	116.1	122.2



TEST NUMBER: P915371

CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	784.7	812.5	786.2	119.1	123.9
115°	889.9	916.2	954.9	238.4	127.0
117.5°	981.2	1012.1	1038.5	817.1	411.7
120°	1083.4	1106.5	1134.5	1153.0	944.0
122.5°	1169.9	1194.8	1225.8	1235.0	1236.7
125°	1258.1	1278.3	1307.7	1318.6	1323.2
127.5°	1338.6	1360.3	1383.7	1399.1	1400.6
130°	1414.5	1439.3	1456.3	1473.4	1471.9
132.5°	1491.9	1512.1	1529.1	1543.0	1541.5
135°	1557.0	1581.7	1595.5	1611.2	1608.0
137.5°	1625.0	1643.5	1659.1	1674.6	1670.0
140°	1691.5	1704.0	1720.9	1734.9	1727.1
142.5°	1747.4	1758.2	1778.2	1790.6	1782.8
145°	1806.2	1804.5	1830.8	1841.7	1833.9
147.5°	1857.1	1852.5	1878.7	1886.5	1880.4
150°	1906.7	1895.8	1920.6	1929.8	1922.1
152.5°	1948.4	1936.1	1959.2	1968.6	1957.8
155°	1988.7	1974.9	1993.4	2002.6	1990.4
157.5°	2021.2	2008.9	2022.8	2033.7	2021.2
160°	2049.1	2039.8	2049.1	2058.3	2047.5
162.5°	2073.8	2064.6	2072.3	2083.1	2069.2
165°	2095.5	2086.3	2090.9	2101.7	2090.9
167.5°	2112.5	2103.2	2107.9	2118.8	2104.8
170°	2126.5	2117.1	2120.3	2131.1	2117.1
172.5°	2135.7	2126.5	2129.6	2140.5	2126.5
175°	2143.4	2132.6	2135.7	2146.5	2131.1
177.5°	2146.5	2135.7	2137.3	2148.2	2134.2
180°	2138.8	2138.8	2138.8	2138.8	2138.8



TEST NUMBER: P915371
 CATALOG NUMBER: DFN2DIP-TR3F0-060D080US927-FLLONL

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	9.43	10.23	10.44	11.25	12.62	9.00	9.80	10.01	10.82	12.19
	3H	11.07	11.79	12.10	12.82	14.21	10.60	11.32	11.63	12.36	13.75
	4H	11.65	12.33	12.69	13.37	14.76	11.18	11.86	12.22	12.90	14.30
	6H	12.04	12.67	13.09	13.71	15.12	11.57	12.20	12.62	13.24	14.65
	8H	12.14	12.74	13.19	13.79	15.20	11.67	12.27	12.73	13.33	14.73
	12H	12.18	12.75	13.24	13.80	15.23	11.71	12.28	12.77	13.33	14.76
4H	2H	9.88	10.56	10.92	11.59	12.99	9.53	10.22	10.58	11.25	12.65
	3H	11.73	12.29	12.78	13.36	14.77	11.34	11.91	12.39	12.97	14.38
	4H	12.43	12.95	13.49	14.01	15.44	12.03	12.55	13.09	13.61	15.04
	6H	12.93	13.38	14.00	14.46	15.89	12.53	12.98	13.60	14.06	15.48
	8H	13.08	13.50	14.15	14.57	16.01	12.67	13.09	13.74	14.16	15.60
	12H	13.14	13.52	14.23	14.61	16.05	12.73	13.11	13.82	14.19	15.64
8H	4H	12.62	13.04	13.69	14.11	15.55	12.26	12.68	13.33	13.75	15.19
	6H	13.24	13.58	14.33	14.70	16.13	12.88	13.22	13.97	14.34	15.78
	8H	13.45	13.75	14.55	14.85	16.31	13.09	13.39	14.19	14.49	15.94
	12H	13.57	13.84	14.68	14.93	16.43	13.19	13.46	14.30	14.55	16.05
12H	4H	12.60	12.98	13.69	14.06	15.51	12.25	12.63	13.34	13.71	15.16
	6H	13.26	13.57	14.36	14.66	16.12	12.92	13.22	14.02	14.32	15.77
	8H	13.50	13.76	14.60	14.85	16.35	13.14	13.41	14.25	14.50	16.00