

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: P905747

Luminaire Tested: DFN2DIP-PN3F0-050D060US835-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P905747
REPORT IS A COMBINATION OF REPORTS P901078 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-050D060US835-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

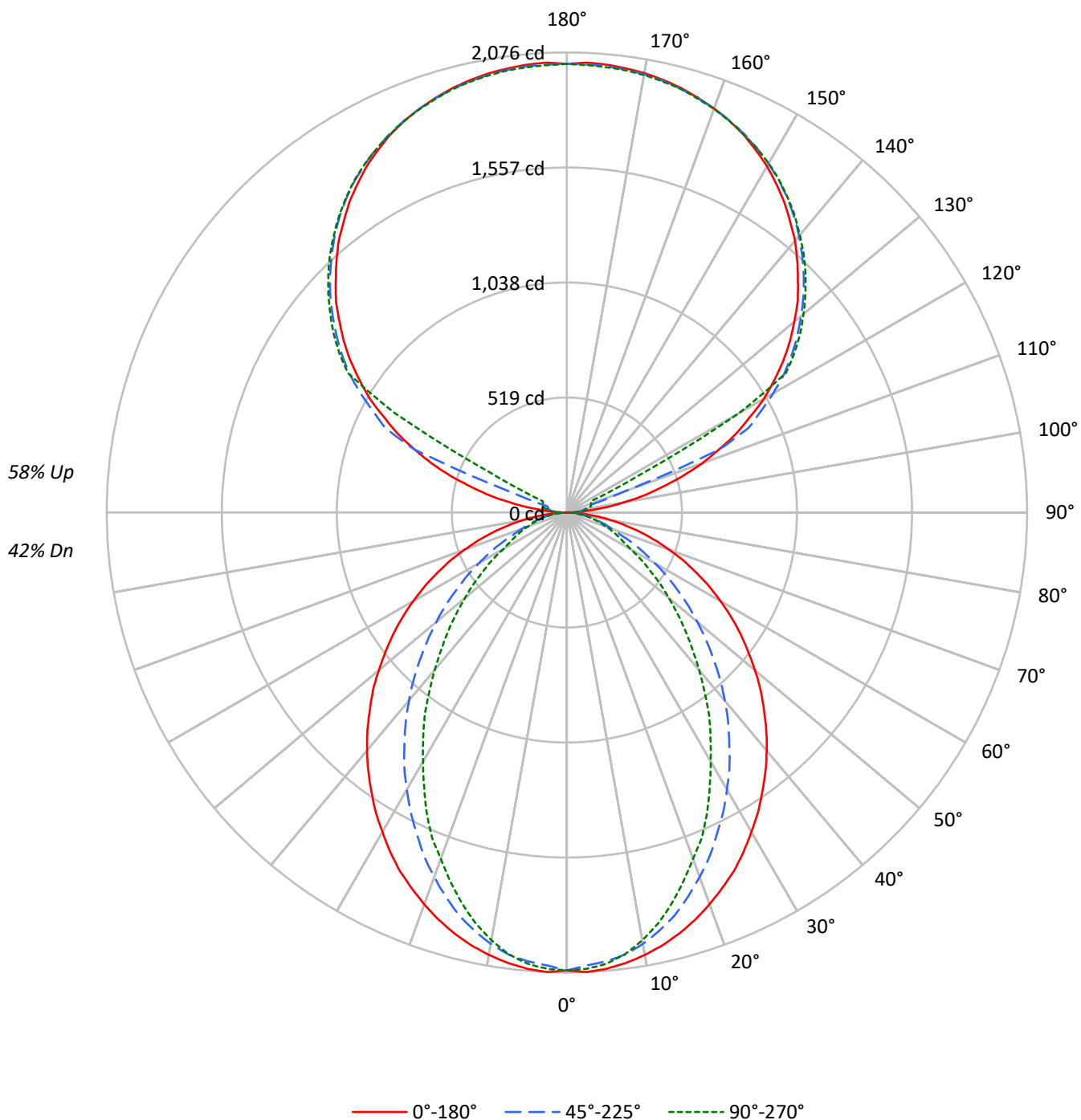
Lumens per Lamp: N/A
Luminaire Lumens: 10190.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 91
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-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	63	63	63	49	49	49
1	96	92	89	85	88	84	81	78	70	67	65	56	55	53	43	43	42
2	88	81	75	70	80	74	69	65	61	58	55	50	47	45	39	37	36
3	81	72	65	59	73	66	60	55	55	50	46	44	41	39	35	33	31
4	74	64	56	50	67	58	52	47	49	44	40	40	36	33	31	29	27
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	28	26	24
6	63	51	43	38	57	47	40	35	39	34	30	32	29	26	26	23	21
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	24	21	19
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17
9	50	38	31	26	46	35	29	25	30	25	22	25	21	18	20	17	15
10	47	35	28	23	43	33	26	22	28	23	19	23	19	17	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2416	2416	2416
5°	2418	2376	2392
10°	2393	2327	2313
15°	2358	2249	2191
20°	2313	2141	2043
25°	2267	2021	1900
30°	2206	1898	1718
35°	2146	1765	1559
40°	2084	1628	1376
45°	2013	1477	1211
50°	1939	1324	1050
55°	1862	1161	895
60°	1773	991	735
65°	1670	818	661
70°	1545	657	596
75°	1388	576	540
80°	1160	478	465
85°	789	311	343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2013 cd/sqm

TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	1.9
10°-20°	531.7	5.2
20°-30°	746.5	7.3
30°-40°	813.7	8.0
40°-50°	747.9	7.3
50°-60°	587.3	5.8
60°-70°	382.3	3.8
70°-80°	196.8	1.9
80°-90°	53.8	0.5
90°-100°	66.8	0.7
100°-110°	248.9	2.4
110°-120°	660.2	6.5
120°-130°	1094.9	10.7
130°-140°	1163.0	11.4
140°-150°	1080.9	10.6
150°-160°	869.0	8.5
160°-170°	560.0	5.5
170°-180°	192.7	1.9
0°-30°	1471.8	14.4
0°-40°	2285.5	22.4
0°-60°	3620.7	35.5
0°-90°	4253.6	41.7
90°-120°	975.8	9.6
90°-150°	4314.7	42.3
90°-180°	5936.0	58.3
0°-180°	10190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2066	2066	2066	2066	2066	
5°	2066	2057	2033	2050	2044	196
15°	1966	1945	1881	1846	1827	554
25°	1784	1724	1601	1524	1496	821
35°	1537	1442	1277	1160	1118	962
45°	1257	1131	935	802	757	971
55°	956	810	608	496	460	854
65°	645	494	325	262	256	640
75°	344	213	150	136	135	364
85°	80	41	36	36	36	92
90°	1	18	29	37	40	10
95°	95	47	57	65	63	113
105°	445	489	89	105	111	476
115°	842	867	904	226	120	829
125°	1191	1210	1238	1248	1253	1062
135°	1474	1498	1511	1525	1522	1139
145°	1710	1708	1733	1744	1736	1069
155°	1883	1870	1887	1896	1884	868
165°	1984	1975	1980	1990	1980	560
175°	2029	2019	2022	2032	2018	193
180°	2025	2025	2025	2025	2025	



TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2066.5	2066.5	2066.5	2066.5	2066.5
2.5°	2075.8	2066.5	2045.9	2064.7	2060.9
5°	2066.5	2057.2	2032.8	2049.6	2044.1
7.5°	2049.6	2038.5	2012.3	2019.7	2010.3
10°	2027.2	2014.1	1976.8	1971.1	1959.9
12.5°	1999.2	1982.4	1931.8	1920.7	1900.0
15°	1965.5	1944.9	1881.4	1845.9	1827.2
17.5°	1926.2	1896.3	1817.7	1776.6	1746.6
20°	1881.4	1843.9	1750.4	1703.8	1662.5
22.5°	1832.8	1789.7	1681.2	1617.7	1589.7
25°	1784.1	1724.2	1600.8	1524.2	1496.0
27.5°	1726.2	1662.5	1526.0	1438.1	1395.1
30°	1664.5	1593.3	1443.7	1348.4	1297.8
32.5°	1604.6	1518.5	1365.3	1253.0	1206.2
35°	1537.3	1441.9	1277.4	1159.5	1118.3
37.5°	1471.8	1368.9	1195.1	1065.9	1019.3
40°	1402.6	1290.5	1108.9	976.2	927.6
42.5°	1331.6	1211.9	1023.0	884.5	837.9
45°	1256.8	1131.4	935.1	802.2	757.3
47.5°	1185.7	1053.0	851.0	718.1	677.0
50°	1107.2	974.4	768.7	639.5	600.4
52.5°	1030.4	890.1	690.1	566.7	531.2
55°	955.6	809.7	607.7	495.6	460.1
57.5°	879.0	729.4	534.9	430.2	400.2
60°	800.4	650.8	458.1	362.9	332.9
62.5°	723.8	574.2	392.7	303.0	288.1
65°	645.2	493.7	325.4	261.9	256.2
67.5°	570.4	418.9	261.9	230.0	224.4
70°	491.9	346.0	216.9	198.2	190.7
72.5°	417.1	278.6	181.4	166.5	162.7
75°	344.1	213.1	149.6	136.5	134.7
77.5°	271.2	151.4	117.9	110.3	106.5
80°	203.8	108.5	89.7	82.3	82.3
82.5°	142.1	73.0	61.7	57.9	57.9
85°	80.4	41.1	35.5	35.5	35.5
87.5°	30.0	14.9	14.9	13.1	13.1
90°	1.4	17.6	29.2	36.7	39.5
92.5°	36.7	30.8	35.1	38.1	39.5
95°	95.2	46.8	57.1	64.6	63.0
97.5°	171.4	51.3	74.6	79.2	80.6
100°	259.4	58.6	83.5	95.2	98.1
102.5°	356.0	353.2	86.5	102.5	107.0
105°	445.4	489.4	89.4	105.4	111.4
107.5°	549.5	586.0	92.4	108.4	114.3
110°	649.2	679.8	256.5	110.0	115.7

TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	742.9	769.2	744.3	112.7	117.3
115°	842.5	867.4	904.1	225.7	120.2
117.5°	928.9	958.2	983.2	773.6	389.7
120°	1025.7	1047.6	1074.1	1091.6	893.8
122.5°	1107.6	1131.1	1160.5	1169.2	1170.8
125°	1191.2	1210.3	1238.1	1248.4	1252.7
127.5°	1267.4	1287.9	1310.0	1324.6	1326.0
130°	1339.2	1362.7	1378.7	1394.9	1393.5
132.5°	1412.5	1431.6	1447.6	1460.8	1459.4
135°	1474.1	1497.6	1510.6	1525.4	1522.4
137.5°	1538.4	1556.0	1570.8	1585.4	1581.1
140°	1601.4	1613.3	1629.3	1642.5	1635.2
142.5°	1654.3	1664.6	1683.6	1695.2	1687.9
145°	1710.0	1708.4	1733.3	1743.6	1736.3
147.5°	1758.2	1753.8	1778.7	1786.0	1780.3
150°	1805.2	1794.9	1818.4	1827.1	1819.8
152.5°	1844.7	1833.0	1854.9	1863.8	1853.5
155°	1882.8	1869.7	1887.3	1896.0	1884.3
157.5°	1913.6	1901.9	1915.1	1925.4	1913.6
160°	1940.0	1931.1	1940.0	1948.7	1938.5
162.5°	1963.3	1954.6	1961.9	1972.2	1959.0
165°	1983.9	1975.2	1979.5	1989.8	1979.5
167.5°	2000.0	1991.2	1995.7	2006.0	1992.7
170°	2013.3	2004.4	2007.4	2017.6	2004.4
172.5°	2022.0	2013.3	2016.2	2026.5	2013.3
175°	2029.3	2019.0	2022.0	2032.2	2017.6
177.5°	2032.2	2022.0	2023.5	2033.8	2020.6
180°	2024.9	2024.9	2024.9	2024.9	2024.9

TEST NUMBER: P905747

CATALOG NUMBER: DFN2DIP-PN3F0-050D060US835-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	9.35	10.12	10.38	11.15	12.54	5.32	6.08	6.35	7.12	8.50
	3H	11.02	11.70	12.06	12.75	14.15	6.49	7.18	7.54	8.22	9.63
	4H	11.62	12.27	12.67	13.31	14.73	6.94	7.59	7.99	8.63	10.05
	6H	12.03	12.63	13.09	13.68	15.10	7.25	7.85	8.31	8.90	10.32
	8H	12.15	12.72	13.22	13.79	15.21	7.34	7.90	8.40	8.97	10.39
	12H	12.21	12.75	13.28	13.81	15.25	7.37	7.91	8.45	8.97	10.42
4H	2H	9.36	10.01	10.42	11.05	12.47	5.90	6.55	6.96	7.60	9.01
	3H	11.18	11.72	12.24	12.79	14.21	7.24	7.78	8.31	8.85	10.28
	4H	11.86	12.35	12.93	13.42	14.87	7.78	8.27	8.85	9.34	10.79
	6H	12.37	12.79	13.45	13.88	15.32	8.19	8.61	9.27	9.70	11.14
	8H	12.54	12.93	13.62	14.01	15.47	8.31	8.71	9.39	9.79	11.24
	12H	12.63	12.98	13.72	14.08	15.54	8.37	8.73	9.47	9.82	11.28
8H	4H	11.82	12.22	12.90	13.30	14.76	8.05	8.45	9.13	9.53	10.98
	6H	12.38	12.71	13.48	13.83	15.28	8.56	8.88	9.66	10.01	11.46
	8H	12.59	12.88	13.70	13.98	15.46	8.74	9.03	9.85	10.13	11.61
	12H	12.72	12.97	13.84	14.07	15.59	8.85	9.11	9.97	10.21	11.72
12H	4H	11.77	12.13	12.87	13.22	14.68	8.05	8.41	9.15	9.50	10.97
	6H	12.35	12.64	13.46	13.74	15.22	8.61	8.89	9.72	10.00	11.47
	8H	12.57	12.82	13.68	13.92	15.43	8.81	9.06	9.92	10.16	11.67