

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: P915344

Luminaire Tested: DFN2DIP-TR3F0-050D080US927-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915344
REPORT IS A COMBINATION OF REPORTS P900345 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-050D080US927-FLLFLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

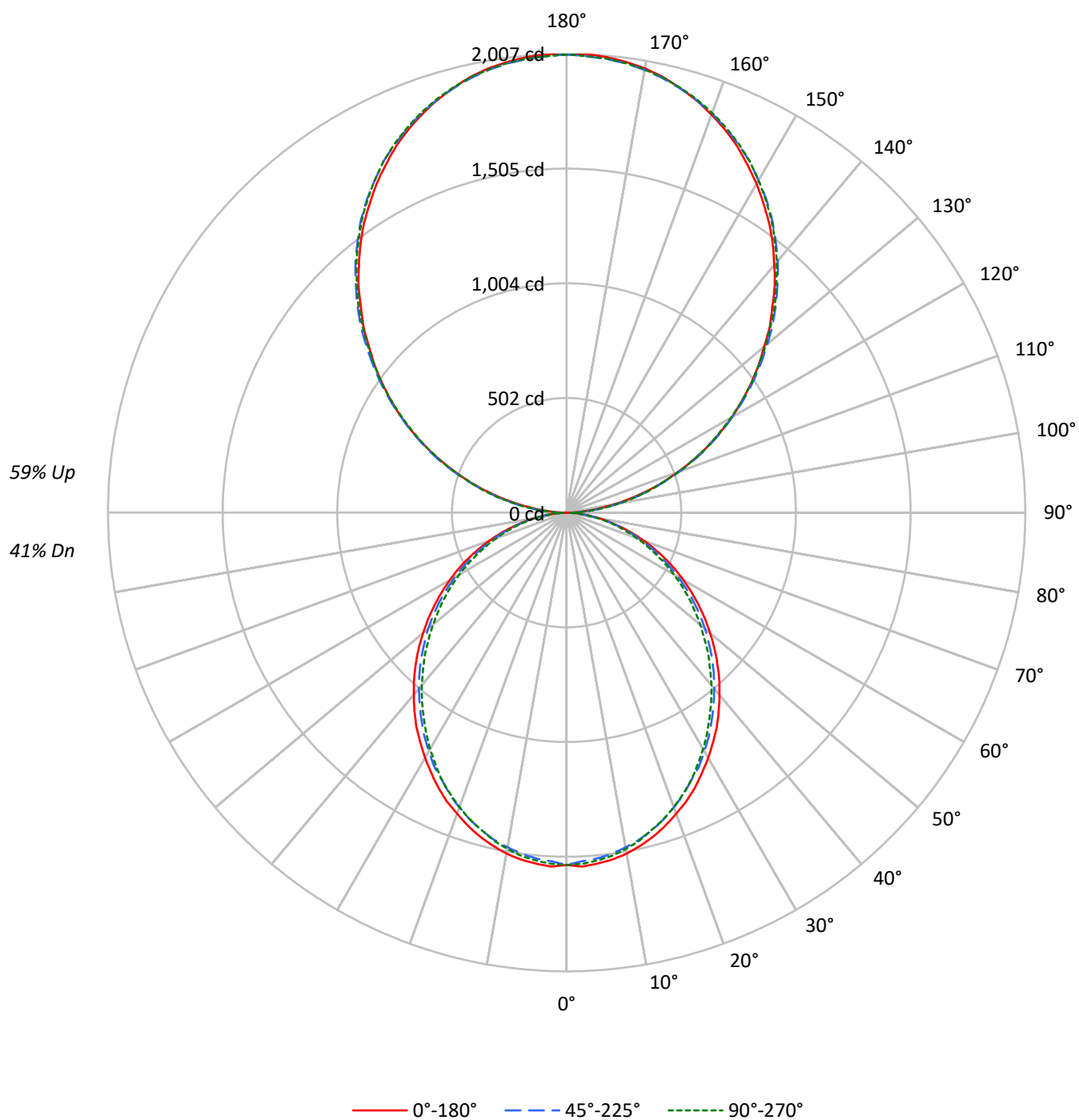
Lumens per Lamp: N/A
Luminaire Lumens: 9529.9 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 106.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48
1	96	92	88	84	87	84	80	77	69	66	64	55	53	52	42	41	41
2	87	80	74	69	79	73	68	63	60	56	53	48	46	43	37	36	34
3	80	70	63	57	72	64	58	53	53	48	45	43	39	37	33	31	29
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	30	27	25
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22
6	61	50	42	36	56	46	38	33	38	33	29	31	27	24	24	21	19
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17
8	53	40	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15
9	49	37	30	25	45	34	27	23	29	23	20	24	20	17	19	16	14
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1920	1920	1920
5°	1923	1892	1905
10°	1906	1865	1878
15°	1877	1833	1837
20°	1838	1789	1794
25°	1799	1736	1745
30°	1751	1687	1683
35°	1705	1629	1618
40°	1649	1571	1556
45°	1592	1512	1491
50°	1531	1451	1418
55°	1466	1379	1349
60°	1393	1295	1272
65°	1314	1208	1179
70°	1212	1101	1080
75°	1072	973	986
80°	902	810	810
85°	637	533	523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 1956 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	1.5
10°-20°	408.1	4.3
20°-30°	599.8	6.3
30°-40°	696.6	7.3
40°-50°	695.8	7.3
50°-60°	606.7	6.4
60°-70°	448.5	4.7
70°-80°	253.7	2.7
80°-90°	72.7	0.8
90°-100°	124.0	1.3
100°-110°	394.1	4.1
110°-120°	674.4	7.1
120°-130°	886.9	9.3
130°-140°	995.5	10.4
140°-150°	976.2	10.2
150°-160°	818.9	8.6
160°-170°	543.1	5.7
170°-180°	189.8	2.0
0°-30°	1153.0	12.1
0°-40°	1849.6	19.4
0°-60°	3152.1	33.1
0°-90°	3927.0	41.2
90°-120°	1192.5	12.5
90°-150°	4051.1	42.5
90°-180°	5603.0	58.8
0°-180°	9529.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1535	1519	1531	1528	146
15°	1467	1458	1439	1445	1438	413
25°	1328	1316	1291	1294	1291	611
35°	1146	1131	1107	1098	1091	715
45°	932	922	900	883	877	719
55°	706	697	679	661	654	631
65°	476	467	452	439	431	470
75°	249	246	238	230	233	266
85°	61	59	58	53	52	68
90°	2	22	59	56	57	9
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	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.2	1541.2	1541.2	1541.2	1541.2
2.5°	1550.1	1542.8	1526.5	1541.2	1538.4
5°	1541.2	1535.4	1519.0	1530.8	1528.0
7.5°	1530.8	1522.0	1505.7	1517.7	1514.7
10°	1514.7	1504.3	1486.5	1498.3	1493.9
12.5°	1492.3	1483.5	1465.8	1473.1	1470.1
15°	1467.1	1458.3	1439.0	1445.0	1437.6
17.5°	1436.0	1427.2	1407.9	1415.2	1407.9
20°	1401.9	1393.1	1372.4	1376.7	1370.9
22.5°	1367.9	1354.6	1335.2	1335.2	1332.2
25°	1327.9	1316.1	1290.9	1293.7	1290.9
27.5°	1283.3	1273.0	1253.8	1249.3	1242.0
30°	1239.0	1227.1	1204.9	1200.5	1194.5
32.5°	1191.5	1182.7	1159.0	1150.0	1144.1
35°	1145.6	1130.8	1107.1	1098.1	1090.8
37.5°	1093.7	1080.4	1056.6	1046.2	1038.9
40°	1040.5	1028.5	1004.7	991.5	985.6
42.5°	988.6	976.6	953.0	938.0	929.2
45°	932.2	921.9	899.5	883.4	877.3
47.5°	877.3	867.0	843.3	826.9	818.1
50°	819.5	812.1	791.4	770.6	763.2
52.5°	763.2	752.8	733.6	717.3	706.9
55°	705.5	696.6	678.7	661.0	653.6
57.5°	647.6	640.2	620.9	603.2	597.1
60°	589.8	584.0	563.2	546.8	542.5
62.5°	533.5	523.2	508.3	493.5	487.6
65°	475.8	466.8	452.0	438.7	431.3
67.5°	416.5	409.0	395.8	385.4	379.4
70°	361.6	355.7	342.3	331.9	326.1
72.5°	305.4	299.4	292.0	281.6	277.2
75°	248.9	246.1	238.5	229.7	232.7
77.5°	198.6	192.6	189.6	185.2	180.9
80°	148.3	146.7	143.7	139.3	136.3
82.5°	100.8	100.8	99.3	93.4	93.4
85°	60.7	59.3	57.8	53.3	51.9
87.5°	26.7	23.8	20.8	16.3	14.8
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

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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	8.61	9.40	9.64	10.44	11.83	8.19	8.97	9.21	10.01	11.40
	3H	10.26	10.97	11.30	12.01	13.42	9.79	10.50	10.83	11.54	12.95
	4H	10.84	11.51	11.89	12.55	13.97	10.37	11.04	11.42	12.09	13.50
	6H	11.23	11.84	12.29	12.89	14.32	10.76	11.37	11.82	12.42	13.86
	8H	11.32	11.91	12.39	12.98	14.40	10.86	11.44	11.92	12.51	13.94
	12H	11.37	11.92	12.44	12.99	14.44	10.89	11.45	11.96	12.51	13.96
4H	2H	9.06	9.73	10.12	10.78	12.20	8.72	9.39	9.78	10.44	11.86
	3H	10.91	11.47	11.98	12.55	13.98	10.52	11.08	11.59	12.16	13.59
	4H	11.62	12.13	12.69	13.19	14.65	11.21	11.73	12.29	12.79	14.25
	6H	12.12	12.56	13.20	13.65	15.09	11.71	12.15	12.79	13.24	14.69
	8H	12.26	12.67	13.34	13.75	15.22	11.85	12.27	12.94	13.35	14.81
	12H	12.33	12.70	13.42	13.79	15.26	11.91	12.28	13.01	13.38	14.85
8H	4H	11.80	12.21	12.88	13.29	14.76	11.45	11.86	12.53	12.94	14.40
	6H	12.42	12.76	13.52	13.88	15.34	12.06	12.40	13.16	13.52	14.98
	8H	12.63	12.93	13.74	14.04	15.52	12.27	12.57	13.38	13.67	15.15
	12H	12.75	13.02	13.87	14.12	15.64	12.38	12.64	13.49	13.74	15.26
12H	4H	11.78	12.15	12.88	13.25	14.72	11.43	11.81	12.53	12.90	14.37
	6H	12.45	12.74	13.56	13.85	15.33	12.10	12.40	13.21	13.50	14.98
	8H	12.68	12.94	13.79	14.04	15.56	12.33	12.59	13.44	13.69	15.21