

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: P919428

Luminaire Tested: DFN2DIP-PN3F0-070D030US935-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P919428
REPORT IS A COMBINATION OF REPORTS P899519 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-070D030US935-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

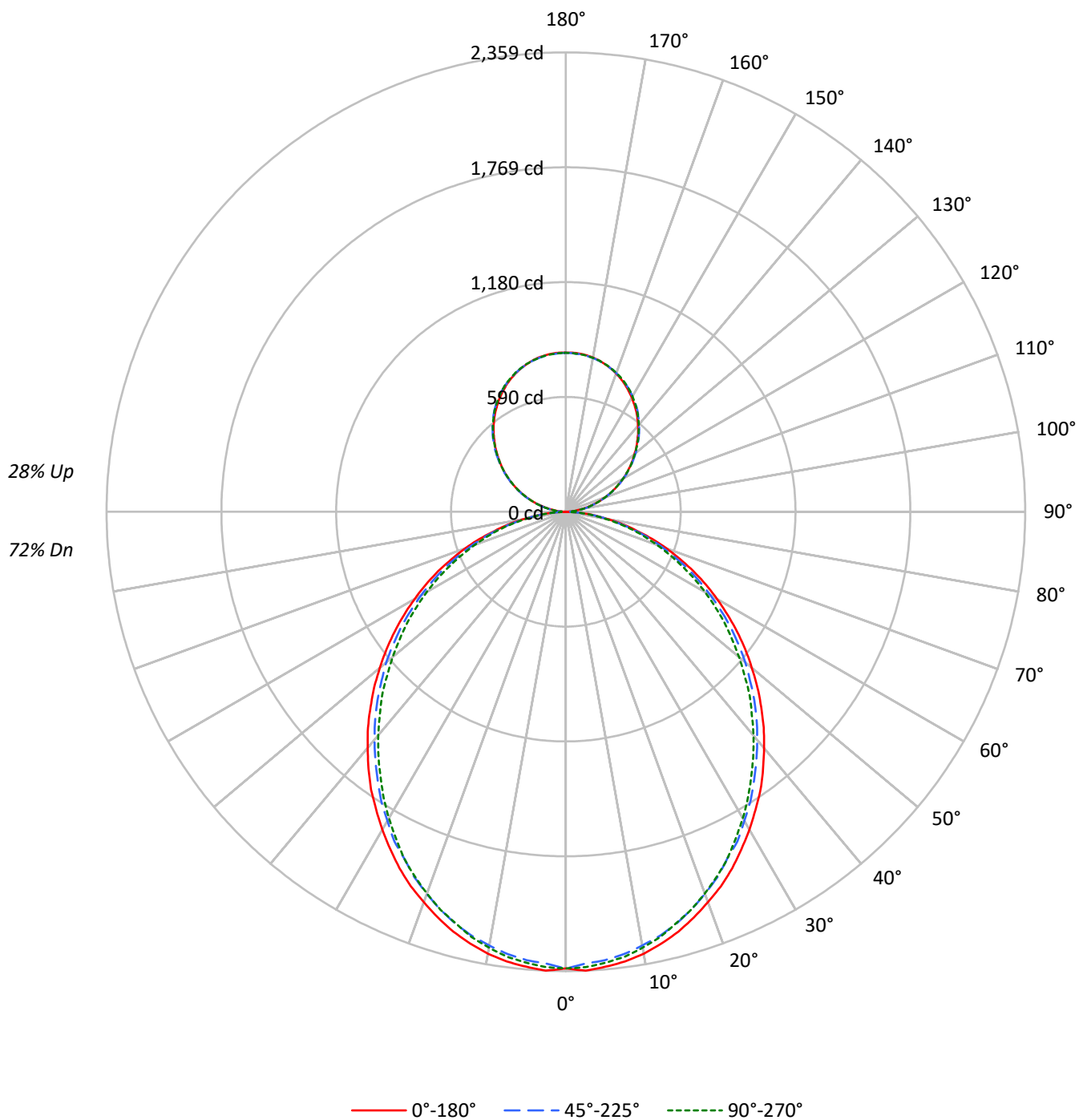
Lumens per Lamp: N/A
Luminaire Lumens: 8252.7 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 92.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

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	112	112	112	112	107	107	107	107	96	96	96	86	86	86	77	77	77
1	103	98	94	91	97	93	90	87	84	81	79	76	74	72	68	66	65
2	94	86	80	74	89	82	76	71	74	69	65	66	63	60	60	57	55
3	85	76	68	62	81	72	65	60	65	60	55	59	54	51	53	49	46
4	78	67	59	52	74	64	56	51	58	52	47	52	48	44	47	43	40
5	72	60	51	45	68	57	49	44	52	46	41	47	42	38	43	38	35
6	66	54	45	39	63	51	44	38	47	40	36	43	37	33	39	34	31
7	62	49	41	35	58	47	39	34	43	36	32	39	34	30	35	31	27
8	57	44	36	31	54	43	35	30	39	33	28	36	30	26	33	28	25
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	26	22
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	24	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2741	2741	2741
5°	2744	2701	2720
10°	2720	2663	2682
15°	2679	2617	2624
20°	2623	2554	2563
25°	2568	2480	2494
30°	2498	2410	2406
35°	2433	2328	2314
40°	2352	2245	2225
45°	2272	2162	2135
50°	2184	2075	2030
55°	2092	1974	1934
60°	1987	1854	1823
65°	1873	1730	1693
70°	1728	1578	1552
75°	1528	1396	1420
80°	1285	1164	1172
85°	906	771	764

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2272 cd/sqm

TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.7	2.7
10°-20°	621.0	7.5
20°-30°	912.7	11.1
30°-40°	1060.0	12.8
40°-50°	1058.7	12.8
50°-60°	923.2	11.2
60°-70°	682.4	8.3
70°-80°	386.1	4.7
80°-90°	104.2	1.3
90°-100°	50.6	0.6
100°-110°	160.6	1.9
110°-120°	274.9	3.3
120°-130°	361.5	4.4
130°-140°	405.7	4.9
140°-150°	397.9	4.8
150°-160°	333.8	4.0
160°-170°	221.3	2.7
170°-180°	77.4	0.9
0°-30°	1754.4	21.3
0°-40°	2814.4	34.1
0°-60°	4796.3	58.1
0°-90°	5969.1	72.3
90°-120°	486.0	5.9
90°-150°	1651.1	20.0
90°-180°	2284.0	27.7
0°-180°	8252.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2345	2345	2345	2345	2345	
5°	2345	2336	2311	2329	2325	223
15°	2232	2219	2190	2199	2188	629
25°	2020	2002	1964	1969	1964	930
35°	1743	1721	1684	1671	1660	1089
45°	1418	1403	1369	1344	1335	1095
55°	1074	1060	1033	1006	994	960
65°	724	710	688	668	656	716
75°	379	374	363	350	354	404
85°	92	90	88	81	79	103
90°	1	9	24	23	23	8
95°	36	43	44	44	43	40
105°	148	150	152	153	153	156
115°	276	280	278	278	276	273
125°	401	407	405	403	402	358
135°	519	526	528	527	525	401
145°	630	635	639	640	637	394
155°	720	722	724	728	726	332
165°	784	783	783	788	784	221
175°	816	814	812	817	813	77
180°	817	817	817	817	817	

TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2345.1	2345.1	2345.1	2345.1	2345.1
2.5°	2358.8	2347.5	2322.6	2345.1	2340.8
5°	2345.1	2336.3	2311.4	2329.3	2325.0
7.5°	2329.3	2315.9	2291.0	2309.3	2304.7
10°	2304.7	2288.9	2261.8	2279.8	2273.1
12.5°	2270.7	2257.4	2230.3	2241.5	2237.0
15°	2232.5	2219.0	2189.6	2198.7	2187.5
17.5°	2185.0	2171.7	2142.2	2153.5	2142.2
20°	2133.1	2119.8	2088.2	2094.9	2086.0
22.5°	2081.5	2061.1	2031.7	2031.7	2027.1
25°	2020.5	2002.5	1964.3	1968.6	1964.3
27.5°	1952.7	1937.0	1907.8	1901.1	1889.8
30°	1885.3	1867.1	1833.4	1826.7	1817.6
32.5°	1813.0	1799.7	1763.5	1749.9	1740.8
35°	1743.2	1720.7	1684.5	1670.9	1659.7
37.5°	1664.2	1643.9	1607.7	1592.0	1580.7
40°	1583.1	1564.9	1528.8	1508.7	1499.6
42.5°	1504.2	1486.0	1450.1	1427.4	1413.9
45°	1418.5	1402.7	1368.7	1344.1	1335.0
47.5°	1335.0	1319.2	1283.1	1258.2	1244.8
50°	1247.0	1235.7	1204.1	1172.6	1161.3
52.5°	1161.3	1145.6	1116.4	1091.5	1075.6
55°	1073.5	1059.9	1032.9	1005.8	994.5
57.5°	985.5	974.2	944.8	917.7	908.7
60°	897.4	888.5	857.0	832.2	825.4
62.5°	811.7	796.0	773.5	751.0	741.9
65°	724.0	710.3	687.9	667.5	656.3
67.5°	633.8	622.3	602.2	586.4	577.3
70°	550.3	541.2	520.8	505.1	496.2
72.5°	464.6	455.6	444.3	428.5	421.8
75°	378.8	374.4	362.9	349.6	354.1
77.5°	302.2	293.1	288.5	281.8	275.2
80°	225.6	223.3	218.7	212.0	207.4
82.5°	153.3	153.3	151.2	142.2	142.2
85°	92.4	90.2	88.1	81.1	79.0
87.5°	40.6	36.2	31.6	24.9	22.5
90°	0.8	8.9	24.1	22.6	23.4
92.5°	15.2	20.7	21.4	22.1	22.1
95°	36.0	42.9	44.1	44.1	42.9
97.5°	59.8	66.2	69.0	69.0	69.0
100°	87.4	93.1	95.1	95.1	94.4
102.5°	116.5	120.7	123.4	124.2	123.4
105°	148.3	150.2	151.7	152.9	152.9
107.5°	179.8	182.7	182.7	183.2	179.8
110°	210.3	214.3	214.3	214.3	212.3

TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	243.3	247.5	246.8	244.8	243.3
115°	275.9	279.7	278.5	277.8	275.9
117.5°	308.1	313.5	310.0	308.1	306.1
120°	340.6	346.0	340.6	340.6	338.4
122.5°	370.1	377.0	373.6	371.6	370.1
125°	401.2	407.3	405.4	403.1	402.4
127.5°	431.4	439.1	436.4	433.4	431.4
130°	459.8	468.6	467.4	466.0	463.2
132.5°	491.5	498.4	498.9	495.5	493.5
135°	518.9	526.5	528.0	527.3	525.3
137.5°	549.4	555.6	556.8	556.4	553.4
140°	576.3	582.5	585.9	585.9	583.2
142.5°	603.9	610.0	612.0	612.8	610.0
145°	630.0	634.9	638.9	639.5	636.9
147.5°	653.4	659.5	662.5	663.7	661.0
150°	677.5	681.7	684.4	686.6	684.4
152.5°	699.0	703.1	706.5	709.3	706.5
155°	720.4	722.3	724.5	728.0	725.8
157.5°	738.8	740.3	741.6	746.5	743.0
160°	755.4	756.8	757.6	761.7	758.8
162.5°	770.6	770.6	771.4	776.0	772.6
165°	783.7	782.9	782.9	787.8	784.4
167.5°	795.5	793.2	793.2	798.1	794.7
170°	804.3	802.4	801.7	806.6	802.4
172.5°	810.5	808.6	807.8	812.7	808.6
175°	815.5	813.5	812.0	816.9	812.7
177.5°	818.1	816.1	814.7	818.9	814.7
180°	816.9	816.9	816.9	816.9	816.9

TEST NUMBER: P919428

CATALOG NUMBER: DFN2DIP-PN3F0-070D030US935-FLLFLL

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	12.58	13.69	13.32	14.45	15.36	12.14	13.25	12.88	14.01	14.92
	3H	14.25	15.25	15.01	16.02	16.96	13.77	14.77	14.52	15.53	16.48
	4H	14.85	15.79	15.62	16.57	17.52	14.36	15.30	15.13	16.08	17.04
	6H	15.26	16.12	16.04	16.91	17.88	14.77	15.63	15.55	16.42	17.39
	8H	15.37	16.19	16.16	17.00	17.97	14.88	15.70	15.67	16.51	17.48
	12H	15.42	16.21	16.22	17.01	18.01	14.92	15.71	15.72	16.51	17.51
4H	2H	13.07	14.01	13.84	14.79	15.74	12.72	13.66	13.49	14.43	15.39
	3H	14.95	15.73	15.74	16.55	17.52	14.55	15.33	15.33	16.14	17.12
	4H	15.67	16.38	16.47	17.19	18.19	15.25	15.96	16.05	16.78	17.78
	6H	16.19	16.81	17.01	17.65	18.65	15.77	16.39	16.59	17.22	18.23
	8H	16.34	16.92	17.17	17.75	18.77	15.92	16.49	16.74	17.33	18.35
	12H	16.43	16.95	17.27	17.80	18.82	15.99	16.51	16.83	17.36	18.39
8H	4H	15.88	16.46	16.70	17.29	18.31	15.51	16.09	16.33	16.92	17.94
	6H	16.51	16.99	17.37	17.87	18.89	16.14	16.62	16.99	17.49	18.51
	8H	16.73	17.16	17.59	18.03	19.07	16.35	16.78	17.21	17.65	18.68
	12H	16.87	17.25	17.74	18.11	19.20	16.47	16.85	17.34	17.71	18.80
12H	4H	15.88	16.40	16.72	17.25	18.28	15.52	16.03	16.36	16.89	17.91
	6H	16.54	16.97	17.41	17.84	18.88	16.18	16.61	17.04	17.48	18.51
	8H	16.79	17.17	17.66	18.03	19.12	16.42	16.80	17.29	17.66	18.75