

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: P930596

Luminaire Tested: DFN2DS-PN3F0-070DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930596
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN3F0-070DS950-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

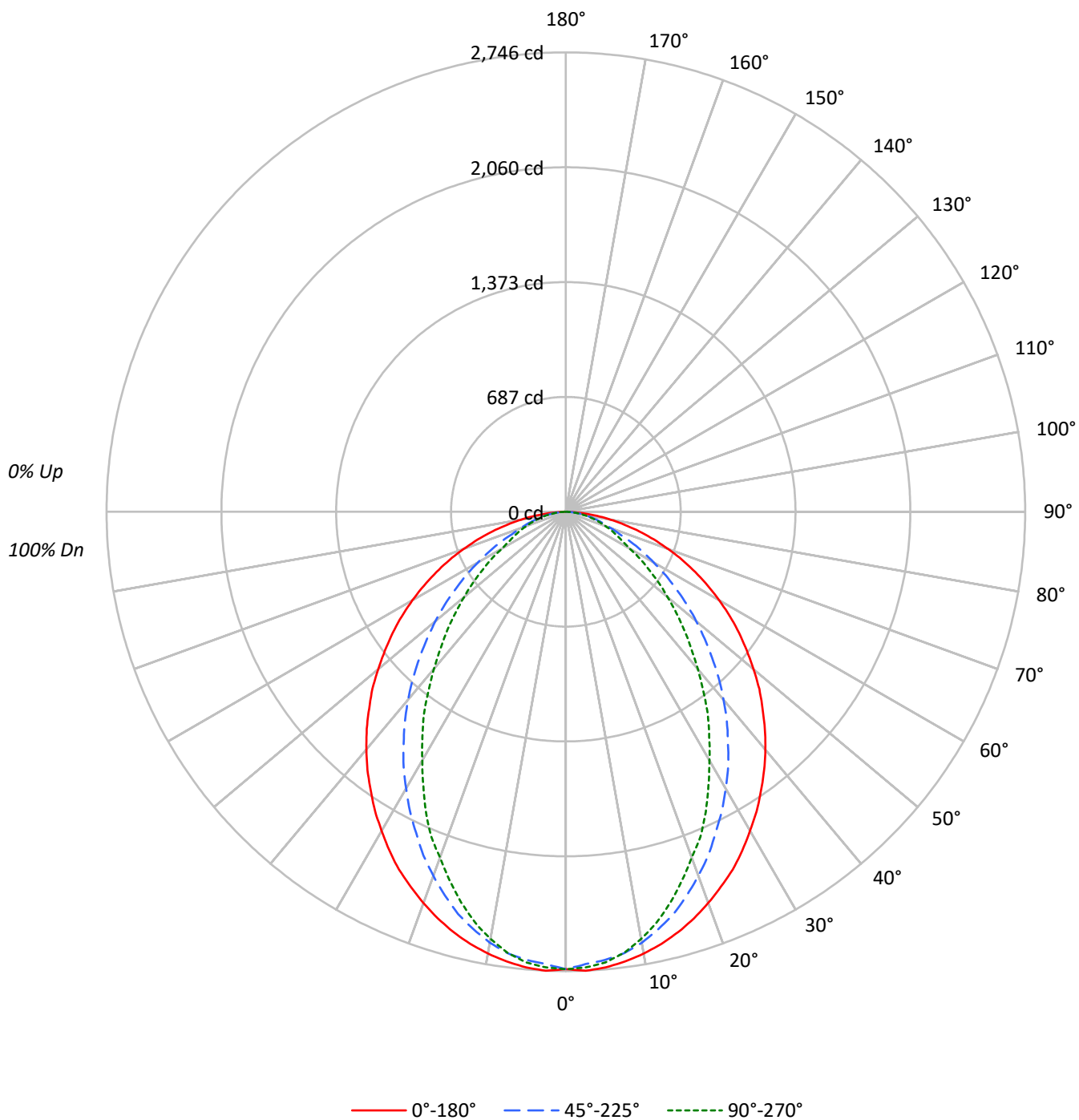
Lumens per Lamp: N/A
Luminaire Lumens: 5622.7 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 73.7
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

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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3196	3196	3196
5°	3208	3156	3173
10°	3184	3104	3078
15°	3147	3012	2926
20°	3096	2881	2736
25°	3045	2732	2553
30°	2972	2578	2318
35°	2902	2412	2111
40°	2832	2239	1873
45°	2749	2045	1656
50°	2664	1849	1445
55°	2577	1639	1241
60°	2476	1417	1030
65°	2361	1191	937
70°	2224	981	862
75°	2056	894	805
80°	1815	799	734
85°	1426	630	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2749 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.2	4.6
10°-20°	703.4	12.5
20°-30°	987.6	17.6
30°-40°	1076.5	19.1
40°-50°	989.4	17.6
50°-60°	777.0	13.8
60°-70°	505.8	9.0
70°-80°	260.3	4.6
80°-90°	66.5	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1947.2	34.6
0°-40°	3023.7	53.8
0°-60°	4790.2	85.2
0°-90°	5622.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5622.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2734	2734	2734	2734	2734	
5°	2734	2722	2689	2712	2704	259
15°	2600	2573	2489	2442	2417	733
25°	2360	2281	2118	2016	1979	1086
35°	2034	1908	1690	1534	1480	1273
45°	1663	1497	1237	1061	1002	1284
55°	1264	1071	804	656	609	1130
65°	854	653	430	346	339	846
75°	455	282	198	181	178	481
85°	106	54	47	47	47	127
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2734.0	2734.0	2734.0	2734.0	2734.0
2.5°	2746.3	2734.0	2706.7	2731.6	2726.6
5°	2734.0	2721.6	2689.4	2711.7	2704.3
7.5°	2711.7	2696.9	2662.3	2672.0	2659.7
10°	2682.0	2664.7	2615.3	2607.7	2593.0
12.5°	2645.0	2622.7	2555.8	2541.0	2513.7
15°	2600.4	2573.0	2489.0	2442.1	2417.4
17.5°	2548.4	2508.8	2404.8	2350.4	2310.8
20°	2489.0	2439.4	2315.8	2254.1	2199.5
22.5°	2424.8	2367.8	2224.2	2140.1	2103.2
25°	2360.4	2281.1	2117.8	2016.5	1979.3
27.5°	2283.8	2199.5	2018.9	1902.7	1845.7
30°	2202.1	2107.9	1909.9	1784.0	1717.1
32.5°	2122.8	2009.0	1806.3	1657.7	1595.7
35°	2033.8	1907.6	1690.0	1534.1	1479.5
37.5°	1947.3	1811.0	1581.1	1410.1	1348.5
40°	1855.6	1707.3	1467.1	1291.5	1227.2
42.5°	1761.7	1603.4	1353.4	1170.2	1108.6
45°	1662.7	1496.8	1237.2	1061.3	1002.0
47.5°	1568.7	1393.1	1125.9	950.0	895.7
50°	1464.8	1289.2	1016.9	846.1	794.4
52.5°	1363.2	1177.6	913.0	749.7	702.7
55°	1264.2	1071.3	804.0	655.7	608.8
57.5°	1162.9	964.9	707.7	569.1	529.5
60°	1059.0	861.0	606.1	480.2	440.5
62.5°	957.6	759.7	519.5	400.9	381.1
65°	853.6	653.1	430.5	346.5	338.9
67.5°	754.7	554.1	346.5	304.2	296.9
70°	650.7	457.8	286.9	262.2	252.2
72.5°	551.8	368.5	239.9	220.3	215.3
75°	455.2	281.9	197.9	180.6	178.2
77.5°	358.8	200.2	155.9	145.9	141.0
80°	269.6	143.5	118.7	109.0	109.0
82.5°	188.0	96.6	81.6	76.6	76.6
85°	106.3	54.3	47.0	47.0	47.0
87.5°	39.6	19.7	19.7	17.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

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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	15.27	16.79	15.64	17.11	17.42	11.23	12.75	11.60	13.07	13.38
	3H	17.04	18.40	17.41	18.73	19.09	12.50	13.86	12.87	14.19	14.55
	4H	17.70	18.98	18.10	19.33	19.71	13.00	14.28	13.40	14.63	15.01
	6H	18.19	19.37	18.60	19.74	20.13	13.38	14.56	13.79	14.93	15.32
	8H	18.36	19.48	18.78	19.87	20.27	13.50	14.63	13.93	15.02	15.42
	12H	18.46	19.54	18.89	19.92	20.35	13.59	14.66	14.02	15.05	15.48
4H	2H	15.38	16.66	15.77	17.00	17.38	11.93	13.21	12.33	13.56	13.94
	3H	17.31	18.37	17.72	18.77	19.17	13.37	14.43	13.78	14.83	15.23
	4H	18.06	19.01	18.49	19.43	19.87	13.97	14.93	14.40	15.34	15.78
	6H	18.65	19.48	19.11	19.92	20.38	14.46	15.29	14.92	15.73	16.19
	8H	18.86	19.64	19.33	20.09	20.55	14.62	15.40	15.08	15.84	16.31
	12H	19.02	19.71	19.50	20.19	20.66	14.74	15.43	15.22	15.91	16.38
8H	4H	18.08	18.86	18.55	19.30	19.77	14.32	15.10	14.79	15.55	16.01
	6H	18.72	19.36	19.22	19.85	20.33	14.91	15.55	15.41	16.04	16.52
	8H	18.97	19.55	19.48	20.06	20.54	15.13	15.71	15.65	16.22	16.71
	12H	19.17	19.68	19.68	20.18	20.74	15.31	15.82	15.82	16.31	16.88
12H	4H	18.07	18.76	18.55	19.24	19.71	14.37	15.06	14.85	15.54	16.01
	6H	18.70	19.28	19.21	19.79	20.28	14.97	15.55	15.49	16.06	16.55
	8H	18.98	19.49	19.49	19.99	20.55	15.25	15.76	15.76	16.25	16.81