

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: P930218

Luminaire Tested: DFN2DS-HX3F0-070DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930218
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-HX3F0-070DS950-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

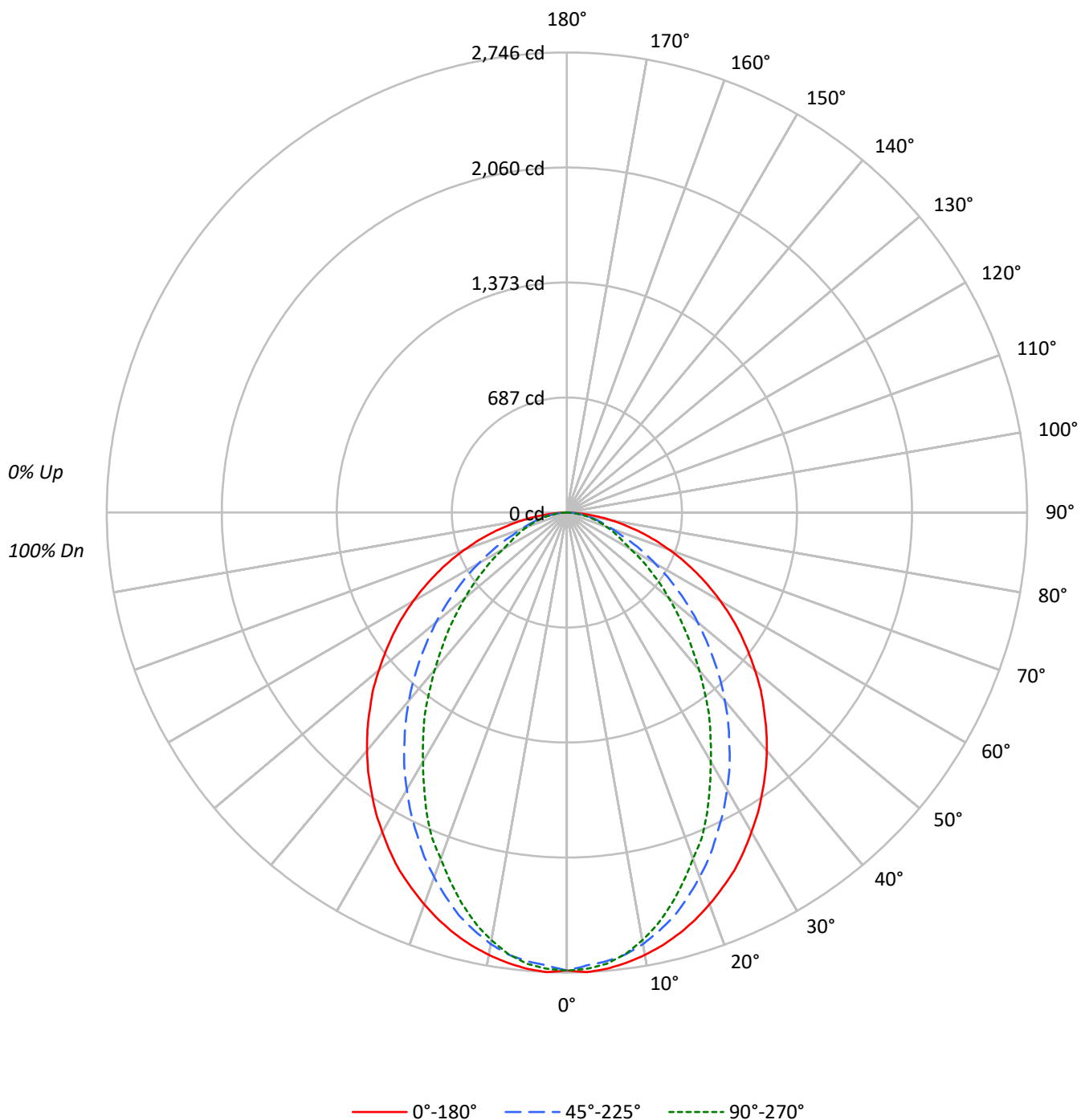
Lumens per Lamp: N/A
Luminaire Lumens: 5622.7 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 73.6
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: P930218

CATALOG NUMBER: DFN2DS-HX3F0-070DS950-RLL

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°	3167	3167	3167
5°	3179	3127	3144
10°	3155	3076	3050
15°	3118	2985	2899
20°	3068	2855	2711
25°	3017	2707	2530
30°	2945	2555	2297
35°	2876	2390	2092
40°	2806	2218	1856
45°	2724	2027	1641
50°	2640	1833	1432
55°	2553	1624	1229
60°	2453	1404	1021
65°	2340	1180	929
70°	2204	972	854
75°	2037	886	798
80°	1798	792	727
85°	1413	625	625

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2724 cd/sqm

TEST NUMBER: P930218

CATALOG NUMBER: DFN2DS-HX3F0-070DS950-RLL

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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CATALOG NUMBER: DFN2DS-HX3F0-070DS950-RLL

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	15.24	16.76	15.60	17.07	17.39	11.20	12.72	11.57	13.04	13.35
	3H	17.00	18.37	17.38	18.70	19.06	12.47	13.83	12.84	14.16	14.52
	4H	17.67	18.95	18.07	19.30	19.68	12.97	14.25	13.37	14.60	14.97
	6H	18.16	19.34	18.57	19.71	20.10	13.35	14.53	13.76	14.90	15.29
	8H	18.33	19.45	18.75	19.84	20.24	13.47	14.60	13.90	14.99	15.39
	12H	18.43	19.51	18.86	19.89	20.32	13.55	14.63	13.98	15.01	15.44
4H	2H	15.34	16.62	15.74	16.97	17.35	11.90	13.18	12.30	13.53	13.90
	3H	17.28	18.34	17.69	18.74	19.14	13.34	14.40	13.75	14.80	15.20
	4H	18.03	18.98	18.46	19.40	19.84	13.94	14.89	14.37	15.31	15.75
	6H	18.62	19.45	19.08	19.89	20.35	14.43	15.26	14.88	15.70	16.16
	8H	18.83	19.61	19.30	20.05	20.52	14.59	15.37	15.05	15.81	16.28
	12H	18.99	19.68	19.47	20.16	20.63	14.71	15.40	15.19	15.88	16.35
8H	4H	18.05	18.83	18.51	19.27	19.74	14.29	15.07	14.76	15.51	15.98
	6H	18.69	19.33	19.18	19.82	20.30	14.88	15.52	15.38	16.01	16.49
	8H	18.94	19.51	19.45	20.02	20.51	15.10	15.68	15.61	16.19	16.67
	12H	19.14	19.65	19.65	20.14	20.71	15.28	15.79	15.79	16.28	16.85
12H	4H	18.03	18.73	18.52	19.21	19.68	14.34	15.03	14.82	15.51	15.98
	6H	18.67	19.25	19.18	19.76	20.24	14.94	15.52	15.46	16.03	16.52
	8H	18.95	19.46	19.46	19.95	20.52	15.22	15.73	15.72	16.22	16.78