

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: P930172

Luminaire Tested: DFN2DS-HX3F0-050DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930172
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-HX3F0-050DS850-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

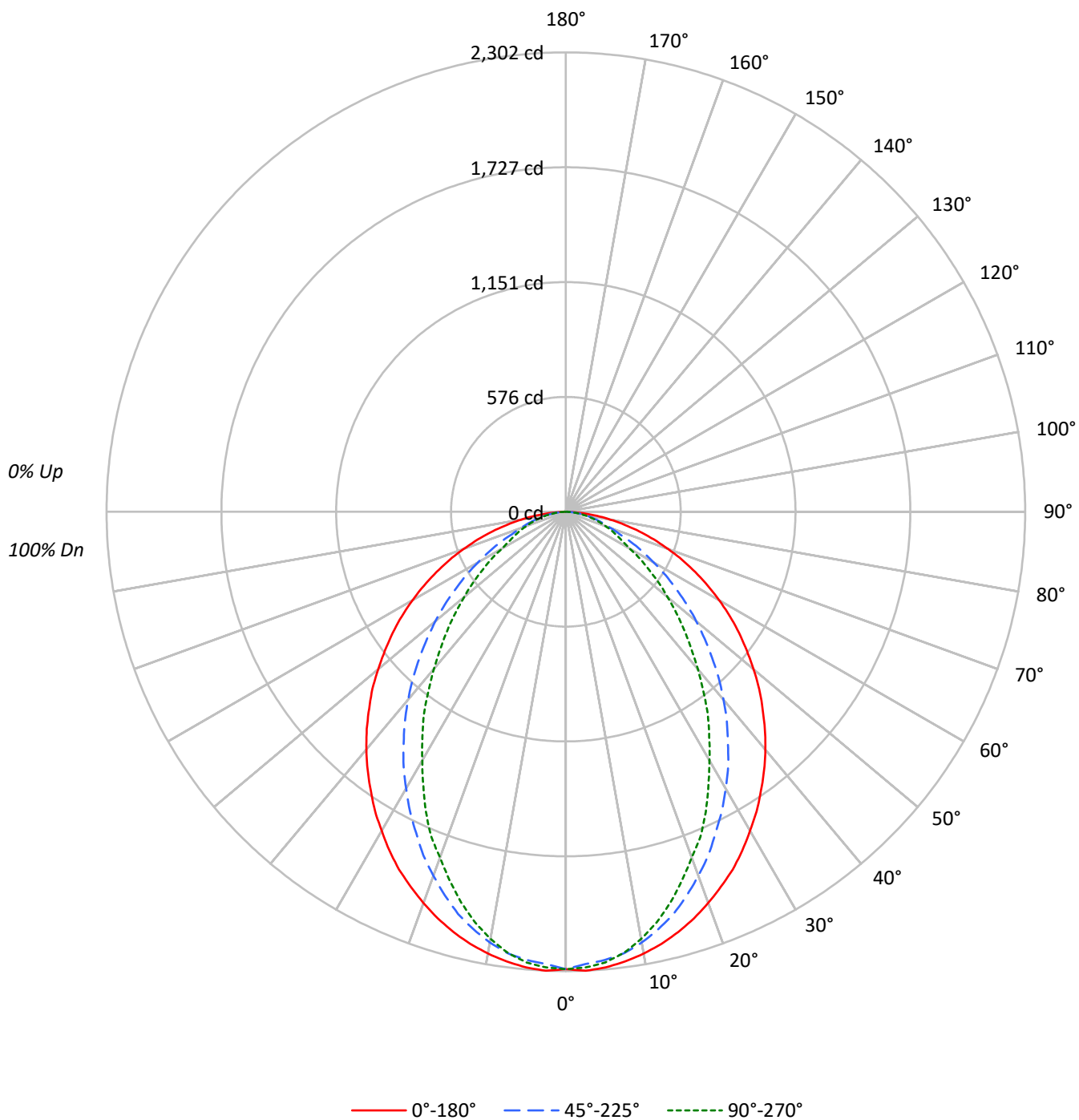
Lumens per Lamp: N/A
Luminaire Lumens: 4713.3 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 49.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930172

CATALOG NUMBER: DFN2DS-HX3F0-050DS850-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°	2655	2655	2655
5°	2665	2621	2636
10°	2644	2579	2557
15°	2614	2502	2430
20°	2572	2393	2273
25°	2529	2269	2120
30°	2469	2142	1925
35°	2411	2003	1754
40°	2352	1860	1556
45°	2283	1699	1376
50°	2213	1536	1200
55°	2140	1361	1031
60°	2056	1177	855
65°	1961	989	779
70°	1847	815	716
75°	1708	742	669
80°	1508	664	609
85°	1186	524	524

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2283 cd/sqm

TEST NUMBER: P930172

CATALOG NUMBER: DFN2DS-HX3F0-050DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	4.6
10°-20°	589.6	12.5
20°-30°	827.8	17.6
30°-40°	902.4	19.1
40°-50°	829.4	17.6
50°-60°	651.3	13.8
60°-70°	424.0	9.0
70°-80°	218.2	4.6
80°-90°	55.7	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°	1632.2	34.6
0°-40°	2534.6	53.8
0°-60°	4015.3	85.2
0°-90°	4713.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4713.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2292	2292	2292	2292	2292	
5°	2292	2281	2254	2273	2267	217
15°	2180	2157	2086	2047	2026	614
25°	1979	1912	1775	1690	1659	910
35°	1705	1599	1417	1286	1240	1067
45°	1394	1255	1037	890	840	1076
55°	1060	898	674	550	510	947
65°	716	548	361	290	284	709
75°	382	236	166	151	149	404
85°	89	46	39	39	39	107
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-HX3F0-050DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2291.7	2291.7	2291.7	2291.7	2291.7
2.5°	2302.1	2291.7	2268.9	2289.8	2285.5
5°	2291.7	2281.4	2254.4	2273.0	2266.9
7.5°	2273.0	2260.7	2231.6	2239.8	2229.4
10°	2248.2	2233.6	2192.3	2185.9	2173.5
12.5°	2217.1	2198.5	2142.4	2130.1	2107.1
15°	2179.7	2156.9	2086.5	2047.1	2026.4
17.5°	2136.2	2103.0	2015.8	1970.2	1937.0
20°	2086.5	2044.9	1941.2	1889.5	1843.7
22.5°	2032.6	1984.8	1864.5	1794.0	1763.0
25°	1978.6	1912.1	1775.3	1690.3	1659.1
27.5°	1914.4	1843.7	1692.3	1594.9	1547.2
30°	1845.9	1767.0	1601.1	1495.4	1439.3
32.5°	1779.5	1684.0	1514.1	1389.6	1337.7
35°	1704.9	1599.1	1416.6	1285.9	1240.2
37.5°	1632.2	1518.1	1325.4	1182.1	1130.4
40°	1555.5	1431.2	1229.8	1082.6	1028.7
42.5°	1476.7	1344.0	1134.5	980.9	929.2
45°	1393.8	1254.7	1037.0	889.6	839.8
47.5°	1314.9	1167.8	943.8	796.4	750.8
50°	1227.9	1080.6	852.5	709.2	665.8
52.5°	1142.7	987.1	765.3	628.5	589.1
55°	1059.8	898.0	673.9	549.6	510.3
57.5°	974.8	808.9	593.2	477.1	443.8
60°	887.6	721.7	508.0	402.5	369.2
62.5°	802.7	636.8	435.5	336.0	319.5
65°	715.5	547.5	360.9	290.4	284.1
67.5°	632.6	464.6	290.4	255.1	248.9
70°	545.5	383.7	240.5	219.8	211.5
72.5°	462.6	309.0	201.2	184.6	180.4
75°	381.6	236.3	165.9	151.4	149.4
77.5°	300.8	167.9	130.8	122.3	118.1
80°	226.0	120.3	99.5	91.3	91.3
82.5°	157.6	81.0	68.4	64.2	64.2
85°	89.2	45.6	39.4	39.4	39.4
87.5°	33.3	16.5	16.5	14.5	14.5
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	14.63	16.15	14.99	16.46	16.78	10.59	12.11	10.95	12.42	12.74
	3H	16.39	17.76	16.77	18.09	18.45	11.85	13.22	12.23	13.55	13.91
	4H	17.06	18.34	17.46	18.69	19.07	12.35	13.64	12.75	13.98	14.36
	6H	17.55	18.73	17.96	19.10	19.49	12.74	13.92	13.15	14.28	14.68
	8H	17.71	18.84	18.14	19.23	19.63	12.86	13.99	13.29	14.38	14.78
	12H	17.82	18.89	18.25	19.28	19.71	12.94	14.02	13.37	14.40	14.83
4H	2H	14.73	16.01	15.13	16.36	16.74	11.28	12.56	11.68	12.91	13.29
	3H	16.66	17.73	17.07	18.13	18.53	12.73	13.79	13.14	14.19	14.59
	4H	17.41	18.37	17.85	18.79	19.22	13.33	14.28	13.76	14.70	15.14
	6H	18.01	18.84	18.46	19.28	19.74	13.81	14.65	14.27	15.09	15.55
	8H	18.22	19.00	18.68	19.44	19.91	13.98	14.75	14.44	15.20	15.66
	12H	18.37	19.07	18.86	19.55	20.02	14.09	14.79	14.57	15.27	15.74
8H	4H	17.44	18.22	17.90	18.66	19.13	13.68	14.46	14.14	14.90	15.37
	6H	18.08	18.72	18.57	19.21	19.69	14.27	14.91	14.76	15.40	15.88
	8H	18.33	18.90	18.84	19.41	19.90	14.49	15.06	15.00	15.57	16.06
	12H	18.53	19.04	19.04	19.53	20.10	14.67	15.18	15.18	15.67	16.23
12H	4H	17.42	18.12	17.90	18.60	19.07	13.72	14.42	14.21	14.90	15.37
	6H	18.06	18.63	18.57	19.14	19.63	14.33	14.91	14.84	15.42	15.90
	8H	18.34	18.85	18.85	19.34	19.91	14.60	15.11	15.11	15.60	16.17