

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: P930342

Luminaire Tested: DFN2DS-HX4F0-080DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930342
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-HX4F0-080DS940-RLL
Description: 4 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

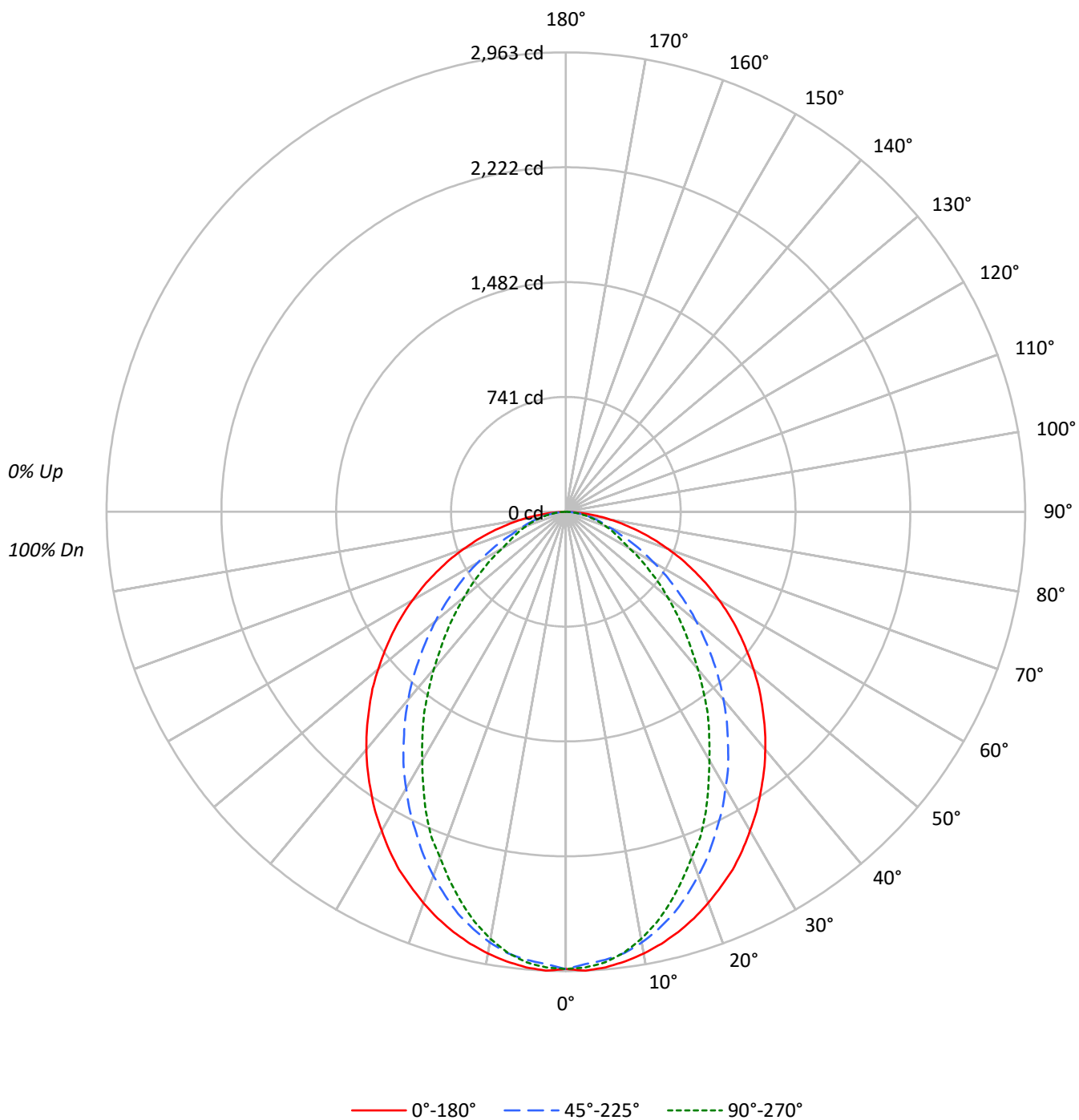
Lumens per Lamp: N/A
Luminaire Lumens: 6065.6 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 81.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
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°	2193	2193	2193
5°	2201	2165	2177
10°	2184	2130	2112
15°	2159	2067	2007
20°	2125	1977	1877
25°	2089	1874	1752
30°	2040	1769	1590
35°	1992	1655	1449
40°	1943	1536	1285
45°	1886	1403	1137
50°	1828	1269	991
55°	1768	1124	851
60°	1699	972	707
65°	1620	817	643
70°	1526	673	592
75°	1411	613	552
80°	1245	548	503
85°	979	433	433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1886 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.4	4.6
10°-20°	758.8	12.5
20°-30°	1065.3	17.6
30°-40°	1161.3	19.1
40°-50°	1067.3	17.6
50°-60°	838.3	13.8
60°-70°	545.6	9.0
70°-80°	280.9	4.6
80°-90°	71.7	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°	2100.6	34.6
0°-40°	3261.8	53.8
0°-60°	5167.4	85.2
0°-90°	6065.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6065.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2949	2936	2901	2925	2917	280
15°	2805	2776	2685	2634	2608	790
25°	2546	2461	2285	2175	2135	1171
35°	2194	2058	1823	1655	1596	1373
45°	1794	1615	1335	1145	1081	1385
55°	1364	1156	867	707	657	1219
65°	921	704	464	374	366	913
75°	491	304	214	195	192	519
85°	115	59	51	51	51	138
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2949.3	2949.3	2949.3	2949.3	2949.3
2.5°	2962.6	2949.3	2919.9	2946.7	2941.4
5°	2949.3	2936.0	2901.1	2925.2	2917.3
7.5°	2925.2	2909.3	2872.0	2882.5	2869.1
10°	2893.2	2874.6	2821.3	2813.1	2797.2
12.5°	2853.3	2829.2	2757.0	2741.1	2711.7
15°	2805.2	2775.7	2685.1	2634.4	2607.8
17.5°	2749.1	2706.3	2594.2	2535.6	2492.8
20°	2685.1	2631.6	2498.2	2431.7	2372.7
22.5°	2615.7	2554.2	2399.4	2308.8	2268.8
25°	2546.3	2460.8	2284.7	2175.4	2135.2
27.5°	2463.6	2372.7	2177.9	2052.5	1991.0
30°	2375.6	2273.9	2060.4	1924.5	1852.2
32.5°	2290.0	2167.2	1948.6	1788.3	1721.5
35°	2194.1	2057.8	1823.1	1654.9	1596.0
37.5°	2100.6	1953.7	1705.6	1521.2	1454.7
40°	2001.8	1841.8	1582.7	1393.2	1323.8
42.5°	1900.4	1729.7	1460.0	1262.4	1195.8
45°	1793.6	1614.7	1334.6	1144.9	1080.9
47.5°	1692.3	1502.8	1214.5	1024.8	966.2
50°	1580.1	1390.7	1097.1	912.7	856.9
52.5°	1470.6	1270.3	984.9	808.8	758.1
55°	1363.8	1155.7	867.4	707.4	656.7
57.5°	1254.5	1041.0	763.5	614.0	571.1
60°	1142.3	928.8	653.8	517.9	475.2
62.5°	1033.0	819.5	560.4	432.4	411.2
65°	920.9	704.5	464.4	373.8	365.5
67.5°	814.1	597.8	373.8	328.2	320.3
70°	702.0	493.9	309.5	282.9	272.1
72.5°	595.2	397.6	258.9	237.6	232.2
75°	491.0	304.2	213.5	194.8	192.3
77.5°	387.1	216.0	168.2	157.4	152.1
80°	290.8	154.9	128.0	117.5	117.5
82.5°	202.8	104.2	88.0	82.7	82.7
85°	114.7	58.6	50.7	50.7	50.7
87.5°	42.7	21.2	21.2	18.7	18.7
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	13.96	15.48	14.33	15.80	16.11	9.92	11.45	10.29	11.76	12.07
	3H	15.73	17.09	16.11	17.42	17.78	11.19	12.55	11.57	12.88	13.24
	4H	16.39	17.68	16.79	18.02	18.40	11.69	12.97	12.09	13.32	13.70
	6H	16.88	18.07	17.30	18.43	18.82	12.07	13.25	12.48	13.62	14.01
	8H	17.05	18.18	17.48	18.57	18.97	12.20	13.32	12.62	13.71	14.11
	12H	17.15	18.23	17.58	18.61	19.04	12.28	13.36	12.71	13.74	14.17
4H	2H	14.07	15.35	14.47	15.70	16.07	10.62	11.90	11.02	12.25	12.63
	3H	16.00	17.06	16.41	17.46	17.86	12.06	13.13	12.47	13.53	13.93
	4H	16.75	17.71	17.18	18.12	18.56	12.66	13.62	13.09	14.03	14.47
	6H	17.34	18.17	17.80	18.62	19.08	13.15	13.98	13.61	14.42	14.88
	8H	17.56	18.33	18.02	18.78	19.24	13.31	14.09	13.78	14.53	15.00
	12H	17.71	18.40	18.19	18.88	19.35	13.43	14.12	13.91	14.60	15.07
8H	4H	16.77	17.55	17.24	18.00	18.46	13.02	13.79	13.48	14.24	14.70
	6H	17.41	18.05	17.91	18.55	19.02	13.60	14.24	14.10	14.74	15.21
	8H	17.66	18.24	18.18	18.75	19.24	13.82	14.40	14.34	14.91	15.40
	12H	17.87	18.38	18.38	18.87	19.43	14.00	14.51	14.51	15.00	15.57
12H	4H	16.76	17.45	17.24	17.93	18.40	13.06	13.75	13.54	14.23	14.70
	6H	17.39	17.97	17.91	18.48	18.97	13.67	14.24	14.18	14.75	15.24
	8H	17.68	18.19	18.19	18.68	19.24	13.94	14.45	14.45	14.94	15.51

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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