

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: P930232

Luminaire Tested: DFN2DS-HX3F0-080DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930232
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-HX3F0-080DS935-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

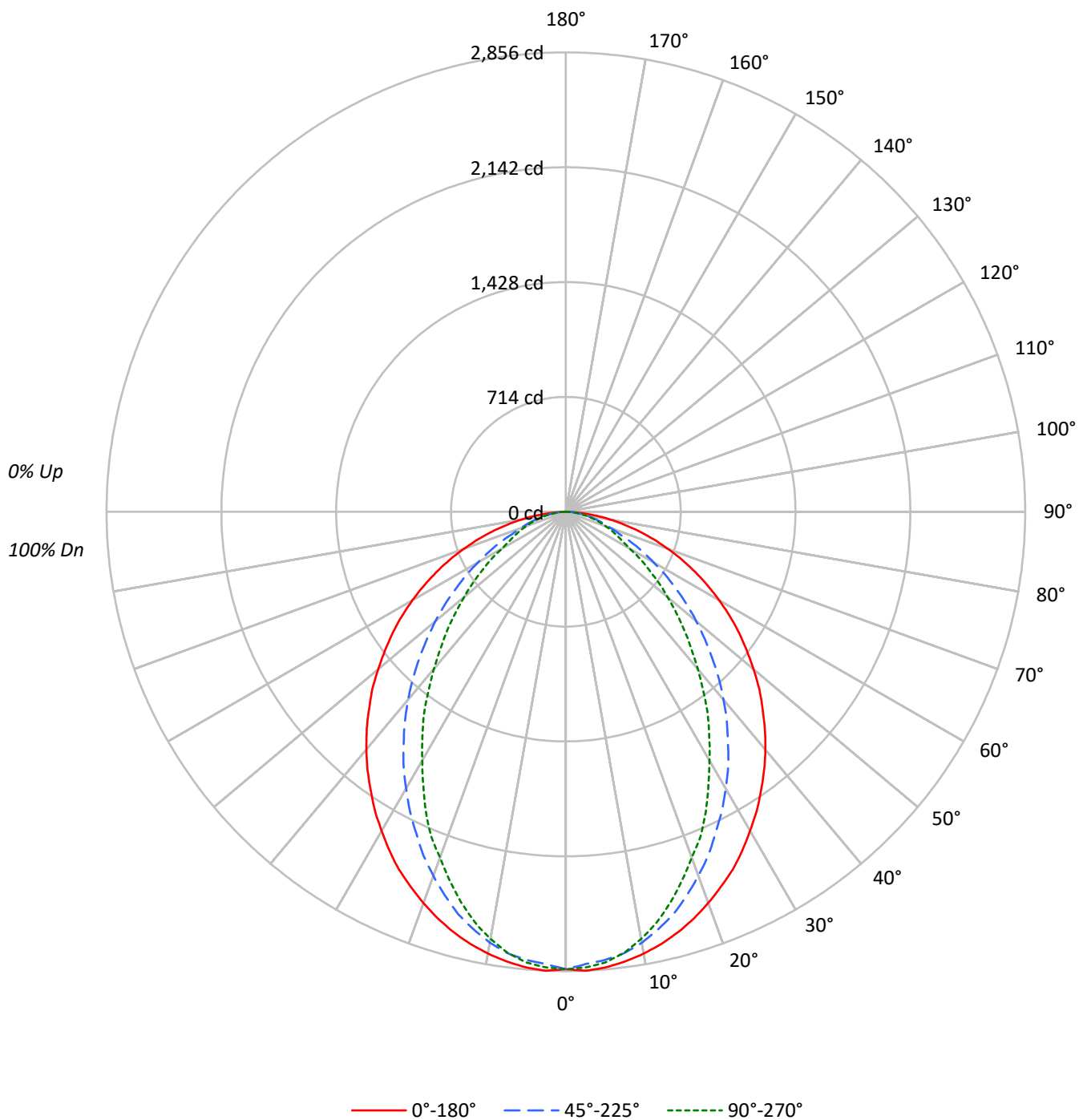
Lumens per Lamp: N/A
Luminaire Lumens: 5848.0 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 84.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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°	3294	3294	3294
5°	3306	3252	3270
10°	3281	3199	3172
15°	3243	3105	3015
20°	3191	2969	2820
25°	3138	2815	2631
30°	3064	2657	2389
35°	2991	2486	2176
40°	2918	2307	1930
45°	2833	2108	1707
50°	2745	1906	1489
55°	2655	1689	1279
60°	2551	1460	1061
65°	2434	1227	966
70°	2292	1011	889
75°	2119	922	830
80°	1870	823	756
85°	1470	649	649

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2833 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.5	4.6
10°-20°	731.6	12.5
20°-30°	1027.1	17.6
30°-40°	1119.6	19.1
40°-50°	1029.1	17.6
50°-60°	808.2	13.8
60°-70°	526.0	9.0
70°-80°	270.8	4.6
80°-90°	69.1	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°	2025.2	34.6
0°-40°	3144.8	53.8
0°-60°	4982.0	85.2
0°-90°	5848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2844	2844	2844	2844	2844	
5°	2844	2831	2797	2820	2813	270
15°	2704	2676	2589	2540	2514	762
25°	2455	2373	2203	2097	2059	1129
35°	2115	1984	1758	1596	1539	1324
45°	1729	1557	1287	1104	1042	1335
55°	1315	1114	836	682	633	1175
65°	888	679	448	360	352	880
75°	473	293	206	188	185	501
85°	111	56	49	49	49	133
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2843.5	2843.5	2843.5	2843.5	2843.5
2.5°	2856.3	2843.5	2815.1	2841.0	2835.8
5°	2843.5	2830.7	2797.1	2820.3	2812.6
7.5°	2820.3	2805.0	2768.9	2779.1	2766.2
10°	2789.4	2771.4	2720.1	2712.2	2696.9
12.5°	2751.0	2727.7	2658.1	2642.8	2614.4
15°	2704.5	2676.1	2588.8	2539.9	2514.2
17.5°	2650.4	2609.2	2501.1	2444.6	2403.4
20°	2588.8	2537.2	2408.6	2344.4	2287.6
22.5°	2521.9	2462.6	2313.3	2225.9	2187.4
25°	2455.0	2372.6	2202.7	2097.4	2058.6
27.5°	2375.2	2287.6	2099.8	1978.9	1919.6
30°	2290.4	2192.3	1986.5	1855.4	1785.8
32.5°	2207.9	2089.5	1878.7	1724.1	1659.7
35°	2115.3	1984.0	1757.7	1595.6	1538.7
37.5°	2025.2	1883.6	1644.4	1466.6	1402.5
40°	1930.0	1775.7	1525.9	1343.2	1276.3
42.5°	1832.2	1667.6	1407.6	1217.2	1152.9
45°	1729.3	1556.8	1286.7	1103.8	1042.1
47.5°	1631.6	1448.9	1171.0	988.1	931.6
50°	1523.4	1340.8	1057.7	880.0	826.1
52.5°	1417.8	1224.7	949.5	779.8	730.9
55°	1314.9	1114.2	836.3	682.0	633.1
57.5°	1209.5	1003.6	736.1	591.9	550.7
60°	1101.3	895.5	630.4	499.3	458.1
62.5°	996.0	790.1	540.3	416.9	396.5
65°	887.9	679.2	447.7	360.4	352.4
67.5°	784.9	576.4	360.4	316.4	308.8
70°	676.8	476.2	298.4	272.7	262.4
72.5°	573.9	383.3	249.6	229.1	223.9
75°	473.4	293.3	205.9	187.8	185.4
77.5°	373.2	208.3	162.2	151.8	146.6
80°	280.4	149.4	123.4	113.3	113.3
82.5°	195.5	100.4	84.9	79.7	79.7
85°	110.6	56.5	48.8	48.8	48.8
87.5°	41.2	20.5	20.5	18.1	18.1
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	15.38	16.90	15.74	17.21	17.53	11.34	12.86	11.70	13.17	13.49
	3H	17.14	18.51	17.52	18.83	19.20	12.60	13.97	12.98	14.29	14.66
	4H	17.81	19.09	18.21	19.44	19.82	13.10	14.38	13.50	14.73	15.11
	6H	18.30	19.48	18.71	19.85	20.24	13.48	14.67	13.90	15.03	15.43
	8H	18.46	19.59	18.89	19.98	20.38	13.61	14.74	14.04	15.13	15.53
	12H	18.57	19.64	19.00	20.03	20.45	13.69	14.77	14.12	15.15	15.58
4H	2H	15.48	16.76	15.88	17.11	17.49	12.03	13.31	12.43	13.66	14.04
	3H	17.41	18.48	17.82	18.88	19.28	13.48	14.54	13.89	14.94	15.34
	4H	18.16	19.12	18.60	19.54	19.97	14.07	15.03	14.51	15.45	15.89
	6H	18.76	19.59	19.21	20.03	20.49	14.56	15.39	15.02	15.84	16.30
	8H	18.97	19.75	19.43	20.19	20.66	14.72	15.50	15.19	15.95	16.41
	12H	19.12	19.82	19.60	20.30	20.77	14.84	15.54	15.32	16.01	16.49
8H	4H	18.19	18.96	18.65	19.41	19.88	14.43	15.21	14.89	15.65	16.12
	6H	18.82	19.47	19.32	19.96	20.44	15.02	15.66	15.51	16.15	16.63
	8H	19.08	19.65	19.59	20.16	20.65	15.24	15.81	15.75	16.32	16.81
	12H	19.28	19.79	19.79	20.28	20.85	15.41	15.92	15.92	16.42	16.98
12H	4H	18.17	18.87	18.65	19.34	19.82	14.47	15.17	14.95	15.64	16.12
	6H	18.81	19.38	19.32	19.89	20.38	15.08	15.66	15.59	16.17	16.65
	8H	19.09	19.60	19.60	20.09	20.66	15.35	15.86	15.86	16.35	16.92