

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: P930219

Luminaire Tested: DFN2DS-HX3F0-080DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930219
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX3F0-080DS830-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

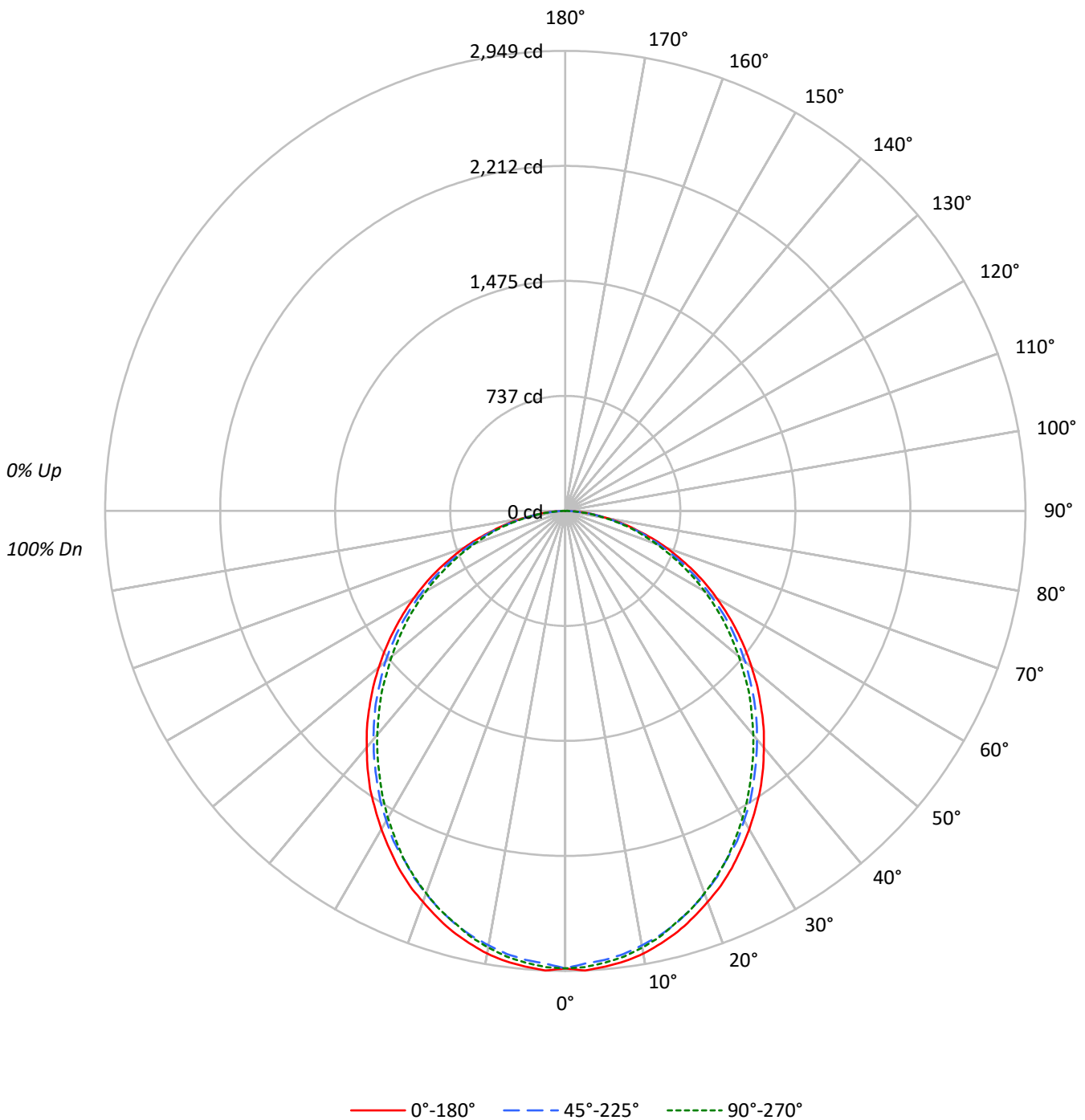
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7460.7 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
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

TEST NUMBER: P930219
CATALOG NUMBER: DFN2DS-HX3F0-080DS830-FLL

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			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3397	3397	3397
5°	3410	3361	3380
10°	3390	3327	3343
15°	3347	3283	3280
20°	3288	3219	3215
25°	3229	3139	3139
30°	3153	3066	3040
35°	3082	2978	2935
40°	2993	2891	2835
45°	2906	2804	2735
50°	2810	2713	2617
55°	2711	2608	2511
60°	2600	2482	2391
65°	2481	2357	2249
70°	2330	2206	2101
75°	2119	2031	1981
80°	1882	1824	1730
85°	1535	1463	1312

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2906 cd/sqm



TEST NUMBER: P930219
 CATALOG NUMBER: DFN2DS-HX3F0-080DS830-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.0	3.7
10°-20°	776.5	10.4
20°-30°	1141.2	15.3
30°-40°	1325.4	17.8
40°-50°	1323.8	17.7
50°-60°	1154.3	15.5
60°-70°	853.3	11.4
70°-80°	482.8	6.5
80°-90°	127.4	1.7
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°	2193.7	29.4
0°-40°	3519.1	47.2
0°-60°	5997.2	80.4
0°-90°	7460.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7460.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2932	2932	2932	2932	2932	
5°	2932	2921	2890	2913	2907	278
15°	2791	2775	2738	2749	2735	786
25°	2526	2504	2456	2461	2456	1163
35°	2180	2152	2106	2089	2075	1361
45°	1774	1754	1711	1681	1669	1369
55°	1342	1325	1292	1258	1244	1200
65°	905	888	860	835	821	895
75°	474	468	454	437	443	505
85°	116	113	110	102	99	136
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2949.3	2935.3	2904.2	2932.3	2926.9
5°	2932.3	2921.2	2890.2	2912.6	2907.2
7.5°	2912.6	2895.8	2864.7	2887.4	2881.8
10°	2881.8	2862.0	2828.2	2850.6	2842.3
12.5°	2839.3	2822.5	2788.7	2802.7	2797.1
15°	2791.4	2774.7	2737.8	2749.2	2735.2
17.5°	2732.2	2715.4	2678.6	2692.7	2678.6
20°	2667.3	2650.5	2611.0	2619.4	2608.3
22.5°	2602.7	2577.2	2540.4	2540.4	2534.7
25°	2526.3	2503.9	2456.1	2461.4	2456.1
27.5°	2441.7	2422.0	2385.4	2377.0	2363.0
30°	2357.4	2334.6	2292.5	2284.1	2272.7
32.5°	2267.0	2250.2	2205.0	2188.0	2176.7
35°	2179.6	2151.5	2106.3	2089.3	2075.2
37.5°	2080.9	2055.4	2010.3	1990.5	1976.5
40°	1979.5	1956.7	1911.6	1886.4	1875.1
42.5°	1880.8	1858.0	1813.2	1784.7	1768.0
45°	1773.7	1753.9	1711.4	1680.6	1669.3
47.5°	1669.3	1649.5	1604.3	1573.2	1556.5
50°	1559.2	1545.2	1505.6	1466.1	1452.1
52.5°	1452.1	1432.3	1395.9	1364.8	1345.0
55°	1342.3	1325.2	1291.5	1257.7	1243.5
57.5°	1232.2	1218.2	1181.4	1147.5	1136.1
60°	1122.1	1111.1	1071.5	1040.4	1032.1
62.5°	1015.0	995.3	967.2	939.1	927.7
65°	905.3	888.2	860.0	834.6	820.6
67.5°	792.4	778.1	752.9	733.3	721.9
70°	688.0	676.6	651.3	631.5	620.4
72.5°	580.9	569.6	555.5	535.8	527.4
75°	473.5	468.2	453.9	437.1	442.7
77.5°	377.8	366.4	360.8	352.4	344.0
80°	282.1	279.1	273.5	265.1	259.3
82.5°	191.8	191.8	189.1	177.7	177.7
85°	115.5	112.8	110.1	101.5	98.7
87.5°	50.9	45.2	39.5	31.1	28.2
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	15.53	17.14	15.90	17.46	17.77	15.09	16.70	15.45	17.01	17.33
	3H	17.28	18.74	17.66	19.06	19.42	16.79	18.24	17.17	18.57	18.93
	4H	17.93	19.30	18.33	19.64	20.02	17.43	18.80	17.83	19.15	19.53
	6H	18.40	19.66	18.81	20.03	20.42	17.89	19.16	18.31	19.53	19.92
	8H	18.54	19.75	18.96	20.14	20.54	18.04	19.25	18.46	19.64	20.04
	12H	18.63	19.79	19.06	20.17	20.60	18.12	19.28	18.55	19.66	20.09
4H	2H	16.09	17.46	16.49	17.81	18.18	15.74	17.11	16.14	17.46	17.83
	3H	18.07	19.21	18.48	19.61	20.01	17.66	18.81	18.07	19.20	19.60
	4H	18.84	19.88	19.27	20.29	20.73	18.42	19.45	18.85	19.87	20.30
	6H	19.44	20.34	19.89	20.78	21.24	19.01	19.91	19.46	20.35	20.81
	8H	19.63	20.48	20.09	20.92	21.38	19.19	20.04	19.65	20.48	20.95
	12H	19.76	20.52	20.24	21.00	21.47	19.31	20.07	19.79	20.54	21.01
8H	4H	19.12	19.96	19.58	20.41	20.87	18.74	19.59	19.20	20.03	20.50
	6H	19.83	20.53	20.32	21.02	21.50	19.45	20.15	19.94	20.64	21.12
	8H	20.09	20.72	20.60	21.23	21.71	19.70	20.33	20.21	20.84	21.32
	12H	20.29	20.85	20.80	21.34	21.90	19.88	20.43	20.38	20.93	21.49
12H	4H	19.14	19.90	19.62	20.38	20.85	18.78	19.54	19.26	20.01	20.48
	6H	19.88	20.51	20.39	21.01	21.50	19.51	20.14	20.02	20.65	21.13
	8H	20.19	20.75	20.70	21.24	21.80	19.81	20.37	20.32	20.86	21.42