

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: P930223

Luminaire Tested: DFN2DS-HX3F0-080DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930223
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-HX3F0-080DS840-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

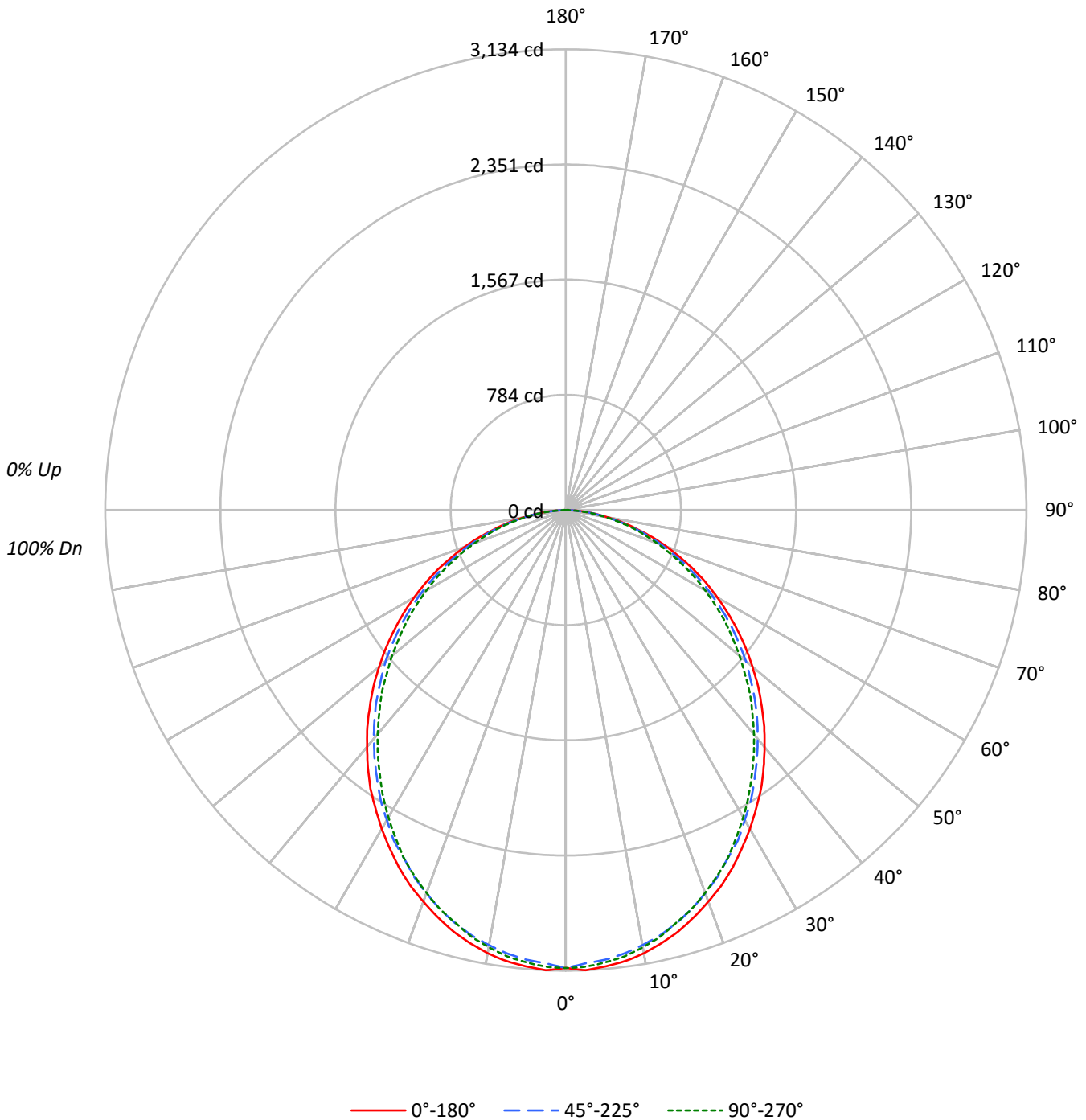
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7927.9 lumens
Efficiency: N/A
Efficacy: 93.9 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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3609	3609	3609
5°	3623	3571	3592
10°	3602	3535	3553
15°	3557	3489	3486
20°	3494	3420	3417
25°	3431	3336	3336
30°	3351	3258	3230
35°	3275	3165	3118
40°	3181	3072	3013
45°	3088	2979	2906
50°	2986	2883	2781
55°	2880	2772	2669
60°	2762	2638	2541
65°	2637	2505	2390
70°	2476	2344	2233
75°	2252	2159	2106
80°	2000	1938	1838
85°	1631	1555	1394

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3088 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.3	3.7
10°-20°	825.2	10.4
20°-30°	1212.7	15.3
30°-40°	1408.4	17.8
40°-50°	1406.7	17.7
50°-60°	1226.6	15.5
60°-70°	906.7	11.4
70°-80°	513.0	6.5
80°-90°	135.4	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°	2331.1	29.4
0°-40°	3739.5	47.2
0°-60°	6372.8	80.4
0°-90°	7927.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7927.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3116	3116	3116	3116	3116	
5°	3116	3104	3071	3095	3089	296
15°	2966	2948	2909	2921	2906	835
25°	2685	2661	2610	2616	2610	1235
35°	2316	2286	2238	2220	2205	1446
45°	1885	1864	1819	1786	1774	1455
55°	1426	1408	1372	1336	1321	1275
65°	962	944	914	887	872	951
75°	503	498	482	464	470	537
85°	123	120	117	108	105	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3115.9	3115.9	3115.9	3115.9	3115.9
2.5°	3134.0	3119.1	3086.1	3115.9	3110.2
5°	3115.9	3104.2	3071.2	3095.0	3089.3
7.5°	3095.0	3077.2	3044.1	3068.3	3062.3
10°	3062.3	3041.2	3005.3	3029.1	3020.3
12.5°	3017.1	2999.3	2963.4	2978.3	2972.3
15°	2966.3	2948.4	2909.3	2921.4	2906.5
17.5°	2903.3	2885.5	2846.3	2861.4	2846.3
20°	2834.3	2816.5	2774.6	2783.5	2771.7
22.5°	2765.7	2738.6	2699.5	2699.5	2693.5
25°	2684.6	2660.8	2609.9	2615.6	2609.9
27.5°	2594.6	2573.7	2534.8	2525.9	2511.0
30°	2505.0	2480.8	2436.0	2427.1	2415.0
32.5°	2409.0	2391.2	2343.1	2325.0	2313.0
35°	2316.1	2286.3	2238.2	2220.1	2205.2
37.5°	2211.2	2184.2	2136.2	2115.2	2100.3
40°	2103.5	2079.3	2031.3	2004.6	1992.5
42.5°	1998.6	1974.4	1926.7	1896.5	1878.8
45°	1884.8	1863.8	1818.6	1785.9	1773.9
47.5°	1773.9	1752.9	1704.8	1671.8	1654.0
50°	1656.9	1641.9	1599.9	1558.0	1543.0
52.5°	1543.0	1522.0	1483.3	1450.2	1429.2
55°	1426.3	1408.2	1372.4	1336.4	1321.4
57.5°	1309.4	1294.5	1255.4	1219.4	1207.3
60°	1192.4	1180.7	1138.6	1105.6	1096.7
62.5°	1078.6	1057.7	1027.7	997.9	985.8
65°	962.0	943.8	913.9	886.9	872.0
67.5°	842.0	826.8	800.1	779.2	767.1
70°	731.1	719.0	692.1	671.1	659.3
72.5°	617.3	605.3	590.3	569.4	560.5
75°	503.2	497.5	482.3	464.5	470.5
77.5°	401.5	389.4	383.4	374.5	365.6
80°	299.8	296.6	290.6	281.7	275.6
82.5°	203.8	203.8	200.9	188.8	188.8
85°	122.7	119.8	117.0	107.8	104.9
87.5°	54.1	48.0	41.9	33.0	29.9
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	15.74	17.35	16.11	17.67	17.98	15.30	16.91	15.66	17.22	17.54
	3H	17.49	18.95	17.87	19.27	19.63	17.00	18.46	17.38	18.78	19.14
	4H	18.14	19.51	18.54	19.86	20.23	17.64	19.01	18.04	19.36	19.74
	6H	18.61	19.88	19.02	20.24	20.63	18.11	19.37	18.52	19.74	20.13
	8H	18.75	19.96	19.18	20.35	20.75	18.25	19.46	18.67	19.85	20.25
	12H	18.84	20.00	19.27	20.38	20.81	18.33	19.49	18.76	19.87	20.30
4H	2H	16.30	17.67	16.70	18.02	18.40	15.95	17.32	16.35	17.67	18.04
	3H	18.28	19.42	18.69	19.82	20.22	17.87	19.02	18.28	19.41	19.81
	4H	19.05	20.09	19.49	20.50	20.94	18.63	19.67	19.06	20.08	20.52
	6H	19.65	20.56	20.10	21.00	21.45	19.22	20.12	19.67	20.56	21.02
	8H	19.84	20.69	20.30	21.13	21.59	19.40	20.25	19.86	20.69	21.16
	12H	19.97	20.73	20.45	21.21	21.68	19.52	20.28	20.00	20.76	21.23
8H	4H	19.33	20.17	19.79	20.62	21.08	18.95	19.80	19.41	20.24	20.71
	6H	20.04	20.74	20.54	21.23	21.71	19.66	20.36	20.15	20.85	21.33
	8H	20.30	20.93	20.81	21.44	21.92	19.91	20.54	20.42	21.05	21.53
	12H	20.50	21.06	21.01	21.55	22.11	20.09	20.65	20.59	21.14	21.70
12H	4H	19.35	20.11	19.83	20.59	21.06	18.99	19.75	19.47	20.22	20.69
	6H	20.09	20.72	20.60	21.23	21.71	19.72	20.35	20.23	20.86	21.34
	8H	20.40	20.96	20.91	21.45	22.01	20.02	20.58	20.53	21.07	21.63