

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: P930221

Luminaire Tested: DFN2DS-HX3F0-080DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930221
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-HX3F0-080DS835-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

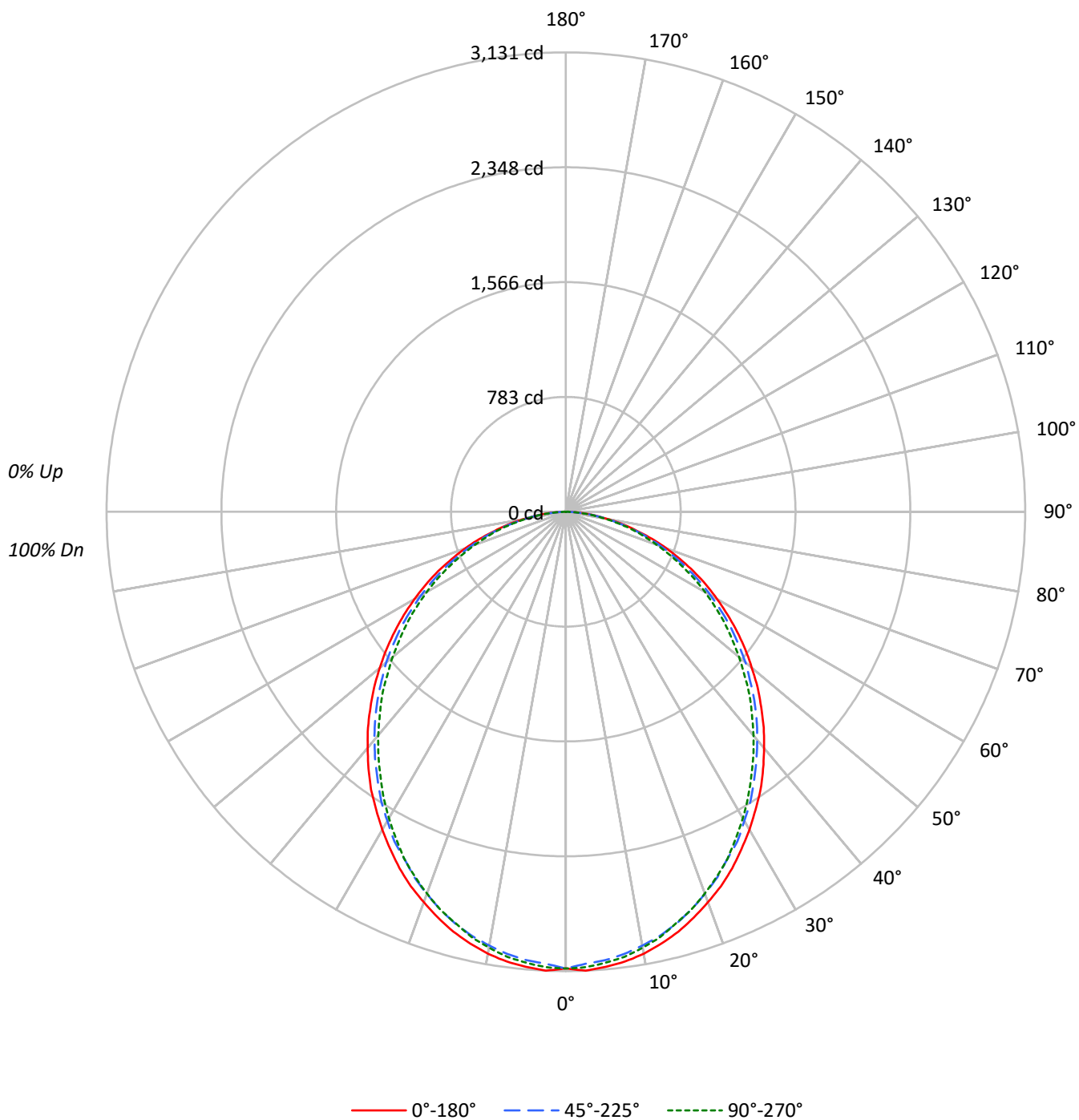
Lumens per Lamp: N/A
Luminaire Lumens: 7920.0 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

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: P930221

CATALOG NUMBER: DFN2DS-HX3F0-080DS835-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
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3606	3606	3606
5°	3619	3568	3589
10°	3598	3531	3549
15°	3554	3485	3482
20°	3490	3417	3413
25°	3428	3332	3332
30°	3347	3255	3227
35°	3272	3162	3115
40°	3178	3069	3010
45°	3084	2976	2903
50°	2983	2880	2778
55°	2878	2769	2666
60°	2760	2635	2538
65°	2634	2502	2388
70°	2474	2342	2231
75°	2250	2156	2103
80°	1998	1936	1836
85°	1629	1554	1393

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3084 cd/sqm

TEST NUMBER: P930221

CATALOG NUMBER: DFN2DS-HX3F0-080DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.0	3.7
10°-20°	824.3	10.4
20°-30°	1211.5	15.3
30°-40°	1407.0	17.8
40°-50°	1405.3	17.7
50°-60°	1225.4	15.5
60°-70°	905.8	11.4
70°-80°	512.5	6.5
80°-90°	135.3	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°	2328.8	29.4
0°-40°	3735.8	47.2
0°-60°	6366.4	80.4
0°-90°	7920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7920.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3113	3113	3113	3113	3113	
5°	3113	3101	3068	3092	3086	295
15°	2963	2946	2906	2918	2904	835
25°	2682	2658	2607	2613	2607	1234
35°	2314	2284	2236	2218	2203	1445
45°	1883	1862	1817	1784	1772	1453
55°	1425	1407	1371	1335	1320	1274
65°	961	943	913	886	871	950
75°	503	497	482	464	470	537
85°	123	120	117	108	105	144
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-HX3F0-080DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3112.8	3112.8	3112.8	3112.8	3112.8
2.5°	3130.9	3116.0	3083.0	3112.8	3107.1
5°	3112.8	3101.1	3068.1	3091.9	3086.2
7.5°	3091.9	3074.1	3041.1	3065.2	3059.2
10°	3059.2	3038.2	3002.3	3026.1	3017.3
12.5°	3014.1	2996.3	2960.4	2975.3	2969.3
15°	2963.3	2945.5	2906.4	2918.5	2903.6
17.5°	2900.4	2882.6	2843.5	2858.5	2843.5
20°	2831.5	2813.7	2771.8	2780.7	2768.9
22.5°	2762.9	2735.9	2696.8	2696.8	2690.8
25°	2681.9	2658.1	2607.3	2613.0	2607.3
27.5°	2592.0	2571.1	2532.3	2523.4	2508.5
30°	2502.5	2478.3	2433.6	2424.7	2412.6
32.5°	2406.6	2388.8	2340.8	2322.7	2310.7
35°	2313.8	2284.0	2236.0	2217.9	2203.0
37.5°	2209.0	2182.0	2134.1	2113.1	2098.2
40°	2101.4	2077.2	2029.3	2002.6	1990.5
42.5°	1996.6	1972.4	1924.8	1894.6	1876.9
45°	1882.9	1861.9	1816.8	1784.1	1772.1
47.5°	1772.1	1751.1	1703.1	1670.1	1652.3
50°	1655.2	1640.3	1598.3	1556.4	1541.5
52.5°	1541.5	1520.5	1481.8	1448.8	1427.8
55°	1424.9	1406.8	1371.0	1335.1	1320.1
57.5°	1308.1	1293.2	1254.1	1218.2	1206.1
60°	1191.2	1179.5	1137.5	1104.5	1095.6
62.5°	1077.5	1056.6	1026.7	996.9	984.8
65°	961.0	942.9	913.0	886.0	871.1
67.5°	841.2	826.0	799.3	778.4	766.3
70°	730.4	718.3	691.4	670.4	658.6
72.5°	616.7	604.7	589.7	568.8	559.9
75°	502.7	497.0	481.8	464.0	470.0
77.5°	401.1	389.0	383.0	374.1	365.2
80°	299.5	296.3	290.3	281.4	275.3
82.5°	203.6	203.6	200.7	188.6	188.6
85°	122.6	119.7	116.9	107.7	104.8
87.5°	54.0	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	16.10	17.66	17.98	15.29	16.90	15.66	17.22	17.53
	3H	17.49	18.94	17.87	19.27	19.63	17.00	18.45	17.37	18.78	19.14
	4H	18.13	19.50	18.53	19.85	20.23	17.64	19.01	18.04	19.36	19.73
	6H	18.60	19.87	19.02	20.24	20.63	18.10	19.37	18.51	19.74	20.13
	8H	18.75	19.96	19.17	20.35	20.75	18.24	19.45	18.67	19.84	20.24
	12H	18.84	20.00	19.27	20.38	20.81	18.33	19.49	18.75	19.87	20.30
4H	2H	16.30	17.67	16.70	18.02	18.39	15.95	17.32	16.34	17.66	18.04
	3H	18.27	19.42	18.68	19.82	20.22	17.87	19.01	18.28	19.41	19.81
	4H	19.05	20.09	19.48	20.50	20.94	18.63	19.66	19.06	20.08	20.51
	6H	19.65	20.55	20.10	20.99	21.45	19.21	20.12	19.67	20.56	21.02
	8H	19.84	20.68	20.30	21.13	21.59	19.40	20.24	19.86	20.69	21.15
	12H	19.97	20.73	20.45	21.20	21.67	19.52	20.28	20.00	20.75	21.22
8H	4H	19.32	20.17	19.78	20.61	21.08	18.95	19.80	19.41	20.24	20.70
	6H	20.04	20.74	20.53	21.23	21.71	19.66	20.36	20.15	20.85	21.32
	8H	20.30	20.93	20.81	21.44	21.92	19.91	20.54	20.42	21.04	21.53
	12H	20.50	21.06	21.00	21.55	22.11	20.08	20.64	20.59	21.13	21.69
12H	4H	19.35	20.11	19.83	20.59	21.06	18.99	19.75	19.47	20.22	20.69
	6H	20.08	20.72	20.59	21.22	21.71	19.71	20.35	20.22	20.85	21.34
	8H	20.40	20.96	20.90	21.45	22.01	20.02	20.58	20.53	21.07	21.63