

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: P930365

Luminaire Tested: DFN2DS-HX4F0-100DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930365
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-HX4F0-100DS835-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

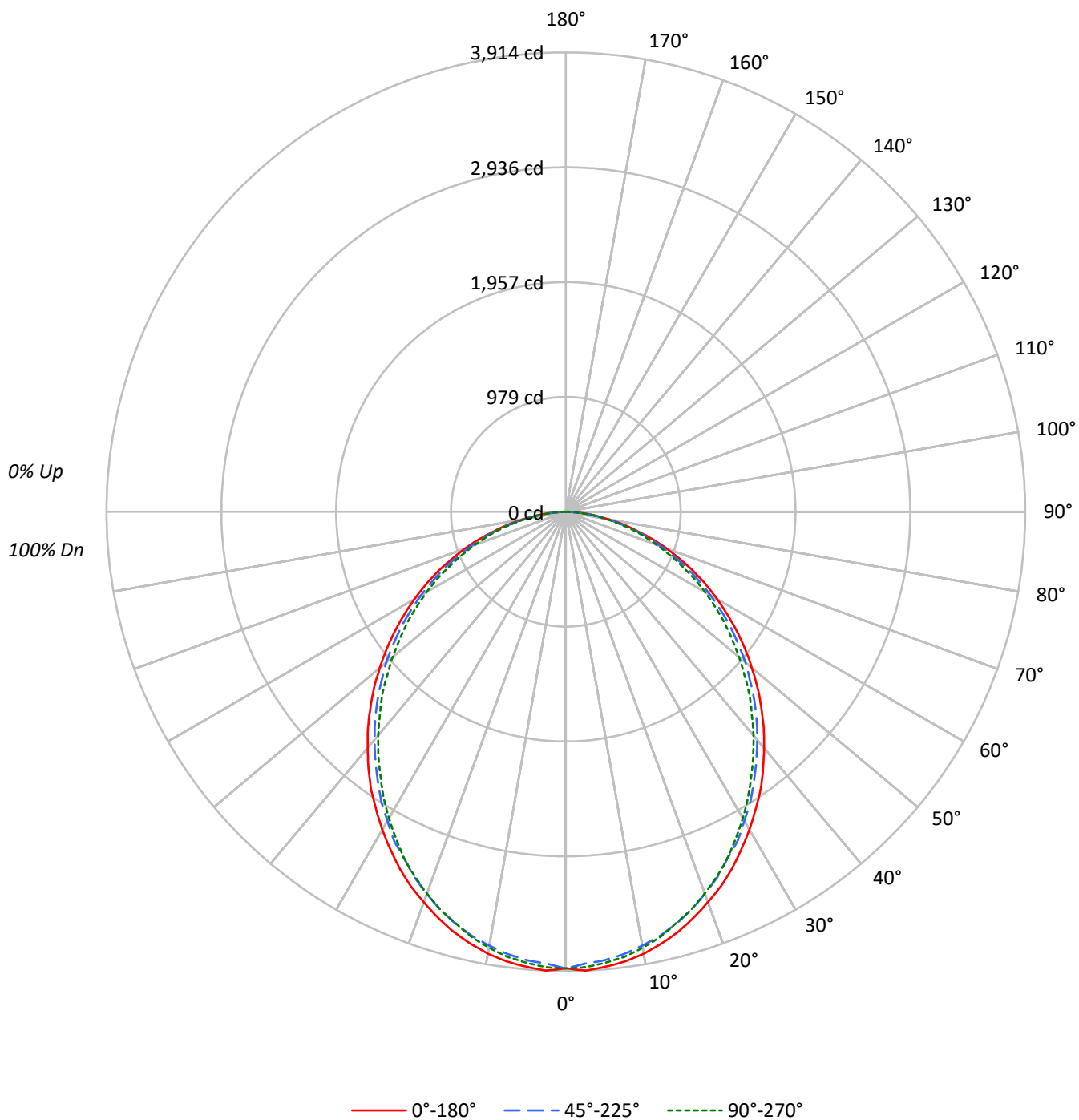
Lumens per Lamp: N/A
Luminaire Lumens: 9900.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 104.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
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	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°	2893	2893	2893
5°	2904	2863	2879
10°	2887	2834	2848
15°	2851	2797	2794
20°	2801	2742	2739
25°	2750	2674	2674
30°	2686	2612	2589
35°	2625	2537	2500
40°	2550	2462	2415
45°	2475	2388	2329
50°	2393	2311	2229
55°	2309	2222	2139
60°	2214	2115	2037
65°	2113	2008	1916
70°	1985	1879	1790
75°	1805	1730	1688
80°	1603	1554	1474
85°	1307	1246	1118

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2475 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.2	3.7
10°-20°	1030.4	10.4
20°-30°	1514.3	15.3
30°-40°	1758.8	17.8
40°-50°	1756.6	17.7
50°-60°	1531.7	15.5
60°-70°	1132.3	11.4
70°-80°	640.6	6.5
80°-90°	169.1	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°	2911.0	29.4
0°-40°	4669.7	47.2
0°-60°	7958.0	80.4
0°-90°	9900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3891	3891	3891	3891	3891	
5°	3891	3876	3835	3865	3858	369
15°	3704	3682	3633	3648	3630	1043
25°	3352	3323	3259	3266	3259	1543
35°	2892	2855	2795	2772	2754	1806
45°	2354	2327	2271	2230	2215	1816
55°	1781	1759	1714	1669	1650	1592
65°	1201	1179	1141	1108	1089	1188
75°	628	621	602	580	588	671
85°	153	150	146	135	131	180
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3891.1	3891.1	3891.1	3891.1	3891.1
2.5°	3913.7	3895.0	3853.7	3891.1	3883.9
5°	3891.1	3876.4	3835.1	3864.9	3857.7
7.5°	3864.9	3842.6	3801.3	3831.5	3824.0
10°	3824.0	3797.8	3752.9	3782.7	3771.6
12.5°	3767.6	3745.4	3700.5	3719.2	3711.6
15°	3704.1	3681.9	3633.0	3648.1	3629.5
17.5°	3625.5	3603.3	3554.4	3573.1	3554.4
20°	3539.3	3517.1	3464.7	3475.8	3461.1
22.5°	3453.6	3419.9	3371.0	3371.0	3363.5
25°	3352.4	3322.6	3259.1	3266.2	3259.1
27.5°	3240.0	3213.8	3165.4	3154.3	3135.6
30°	3128.1	3097.9	3041.9	3030.8	3015.7
32.5°	3008.2	2986.0	2926.0	2903.4	2888.3
35°	2892.3	2855.0	2795.0	2772.4	2753.7
37.5°	2761.3	2727.5	2667.6	2641.4	2622.7
40°	2626.7	2596.5	2536.6	2503.3	2488.2
42.5°	2495.7	2465.5	2406.0	2368.3	2346.1
45°	2353.6	2327.4	2271.0	2230.1	2215.1
47.5°	2215.1	2188.9	2128.9	2087.6	2065.4
50°	2069.0	2050.3	1997.9	1945.5	1926.9
52.5°	1926.9	1900.7	1852.2	1811.0	1784.8
55°	1781.2	1758.6	1713.7	1668.8	1650.2
57.5°	1635.1	1616.4	1567.6	1522.8	1507.7
60°	1489.0	1474.3	1421.9	1380.6	1369.5
62.5°	1346.9	1320.7	1283.4	1246.1	1231.0
65°	1201.2	1178.6	1141.3	1107.5	1088.9
67.5°	1051.6	1032.5	999.2	973.0	957.9
70°	913.0	897.9	864.2	838.0	823.3
72.5°	770.9	755.8	737.2	711.0	699.8
75°	628.4	621.3	602.2	580.0	587.5
77.5°	501.4	486.3	478.7	467.6	456.5
80°	374.3	370.4	362.8	351.7	344.2
82.5°	254.5	254.5	250.9	235.8	235.8
85°	153.2	149.7	146.1	134.6	131.0
87.5°	67.5	59.9	52.4	41.3	37.3
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	14.97	16.58	15.34	16.90	17.21	14.53	16.14	14.89	16.45	16.77
	3H	16.72	18.18	17.10	18.50	18.87	16.23	17.69	16.61	18.01	18.37
	4H	17.37	18.74	17.77	19.09	19.46	16.88	18.24	17.27	18.59	18.97
	6H	17.84	19.11	18.25	19.47	19.86	17.34	18.61	17.75	18.97	19.36
	8H	17.98	19.19	18.41	19.58	19.98	17.48	18.69	17.90	19.08	19.48
	12H	18.07	19.23	18.50	19.61	20.04	17.56	18.72	17.99	19.10	19.53
4H	2H	15.53	16.90	15.93	17.25	17.63	15.18	16.55	15.58	16.90	17.27
	3H	17.51	18.66	17.92	19.05	19.45	17.10	18.25	17.51	18.65	19.05
	4H	18.29	19.32	18.72	19.74	20.17	17.86	18.90	18.29	19.31	19.75
	6H	18.88	19.79	19.34	20.23	20.68	18.45	19.35	18.90	19.80	20.25
	8H	19.07	19.92	19.53	20.36	20.83	18.63	19.48	19.09	19.92	20.39
	12H	19.20	19.96	19.68	20.44	20.91	18.75	19.51	19.23	19.99	20.46
8H	4H	18.56	19.41	19.02	19.85	20.31	18.18	19.03	18.65	19.47	19.94
	6H	19.27	19.98	19.77	20.46	20.94	18.89	19.59	19.39	20.08	20.56
	8H	19.53	20.16	20.04	20.67	21.16	19.14	19.77	19.65	20.28	20.76
	12H	19.73	20.29	20.24	20.78	21.34	19.32	19.88	19.83	20.37	20.93
12H	4H	18.59	19.34	19.07	19.82	20.29	18.22	18.98	18.70	19.46	19.93
	6H	19.32	19.95	19.83	20.46	20.94	18.95	19.58	19.46	20.09	20.57
	8H	19.63	20.19	20.14	20.68	21.24	19.25	19.81	19.76	20.30	20.86