

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: P930253

Luminaire Tested: DFN2DS-HX3F0-090DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930253
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-HX3F0-090DS950-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

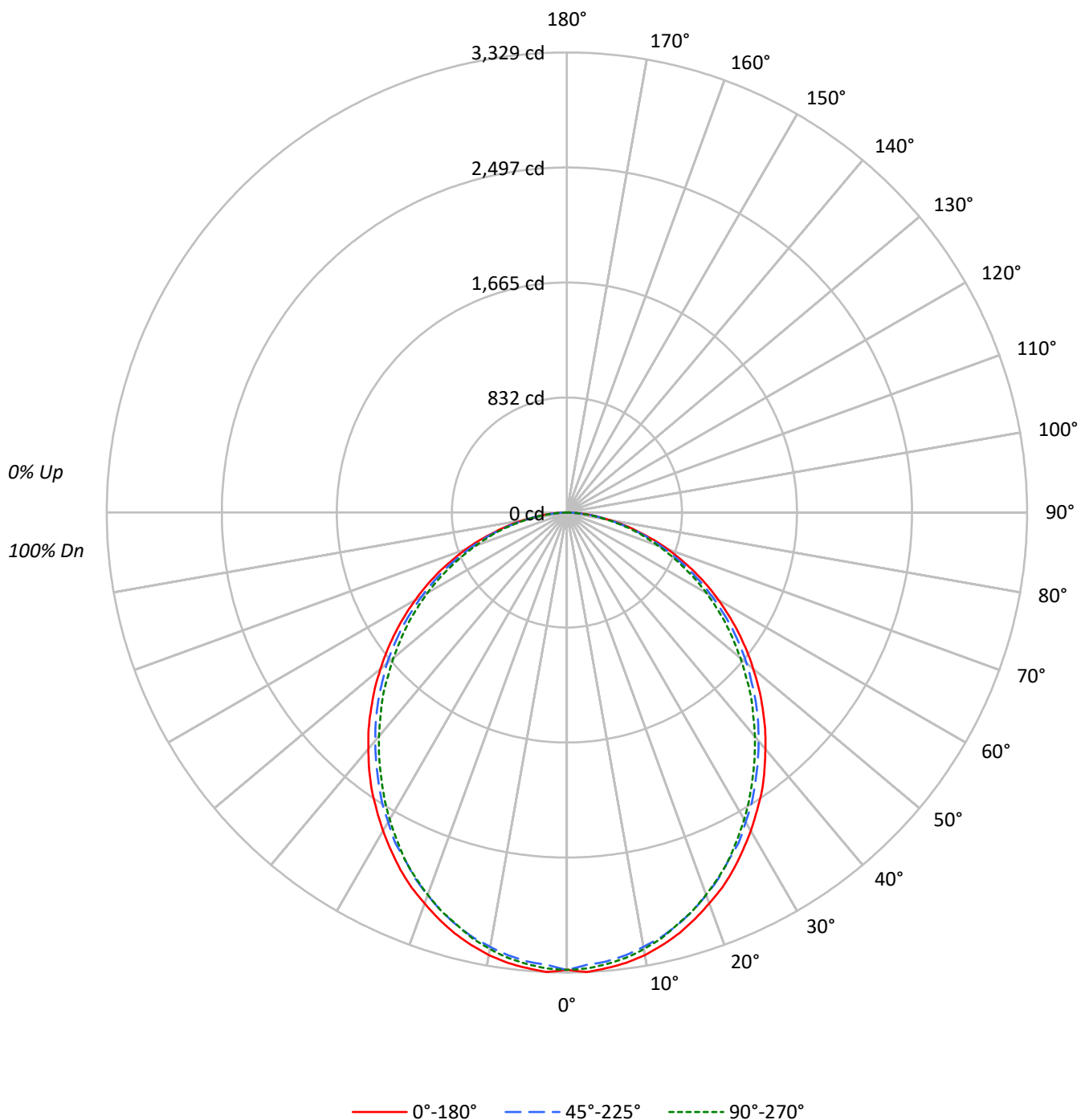
Lumens per Lamp: N/A
Luminaire Lumens: 8420.0 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	3833	3833	3833
5°	3848	3793	3815
10°	3825	3754	3773
15°	3778	3705	3702
20°	3711	3632	3629
25°	3644	3543	3543
30°	3559	3460	3431
35°	3479	3361	3312
40°	3378	3262	3200
45°	3279	3164	3086
50°	3171	3062	2953
55°	3059	2943	2834
60°	2934	2802	2698
65°	2800	2660	2538
70°	2630	2489	2371
75°	2392	2292	2236
80°	2124	2058	1953
85°	1732	1652	1481

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3279 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.5	3.7
10°-20°	876.4	10.4
20°-30°	1287.9	15.3
30°-40°	1495.9	17.8
40°-50°	1494.0	17.7
50°-60°	1302.7	15.5
60°-70°	963.0	11.4
70°-80°	544.8	6.5
80°-90°	143.8	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°	2475.8	29.4
0°-40°	3971.6	47.2
0°-60°	6768.3	80.4
0°-90°	8420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8420.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3309	3309	3309	3309	3309	
5°	3309	3297	3262	3287	3281	314
15°	3150	3131	3090	3103	3087	887
25°	2851	2826	2772	2778	2772	1312
35°	2460	2428	2377	2358	2342	1536
45°	2002	1980	1932	1897	1884	1545
55°	1515	1496	1458	1419	1404	1354
65°	1022	1002	971	942	926	1010
75°	534	528	512	493	500	571
85°	130	127	124	114	111	153
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3309.3	3309.3	3309.3	3309.3	3309.3
2.5°	3328.6	3312.7	3277.6	3309.3	3303.2
5°	3309.3	3296.8	3261.8	3287.1	3280.9
7.5°	3287.1	3268.2	3233.0	3258.7	3252.3
10°	3252.3	3230.0	3191.8	3217.2	3207.7
12.5°	3204.3	3185.4	3147.3	3163.1	3156.8
15°	3150.3	3131.4	3089.9	3102.7	3086.8
17.5°	3083.4	3064.5	3023.1	3038.9	3023.1
20°	3010.2	2991.3	2946.7	2956.1	2943.7
22.5°	2937.2	2908.6	2867.0	2867.0	2860.6
25°	2851.2	2825.8	2771.9	2777.9	2771.9
27.5°	2755.6	2733.3	2692.2	2682.8	2666.9
30°	2660.5	2634.8	2587.1	2577.7	2564.9
32.5°	2558.5	2539.6	2488.6	2469.4	2456.5
35°	2459.9	2428.2	2377.1	2358.0	2342.1
37.5°	2348.5	2319.8	2268.8	2246.5	2230.7
40°	2234.0	2208.4	2157.3	2129.0	2116.2
42.5°	2122.6	2097.0	2046.3	2014.3	1995.4
45°	2001.7	1979.5	1931.5	1896.7	1884.0
47.5°	1884.0	1861.6	1810.6	1775.6	1756.7
50°	1759.7	1743.8	1699.2	1654.7	1638.8
52.5°	1638.8	1616.5	1575.3	1540.3	1518.0
55°	1514.9	1495.7	1457.5	1419.4	1403.5
57.5°	1390.7	1374.8	1333.3	1295.1	1282.3
60°	1266.4	1253.9	1209.3	1174.3	1164.8
62.5°	1145.5	1123.2	1091.5	1059.8	1047.0
65°	1021.6	1002.4	970.6	942.0	926.1
67.5°	894.3	878.2	849.7	827.5	814.7
70°	776.5	763.7	735.0	712.7	700.2
72.5°	655.6	642.8	626.9	604.7	595.3
75°	534.5	528.3	512.2	493.3	499.7
77.5°	426.4	413.6	407.2	397.8	388.3
80°	318.4	315.0	308.5	299.1	292.8
82.5°	216.4	216.4	213.4	200.5	200.5
85°	130.3	127.3	124.3	114.4	111.4
87.5°	57.4	50.9	44.6	35.2	31.8
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	15.95	17.56	16.32	17.88	18.19	15.51	17.12	15.87	17.43	17.75
	3H	17.70	19.16	18.08	19.48	19.84	17.21	18.66	17.59	18.99	19.35
	4H	18.35	19.72	18.75	20.06	20.44	17.85	19.22	18.25	19.57	19.95
	6H	18.82	20.09	19.23	20.45	20.84	18.32	19.58	18.73	19.95	20.34
	8H	18.96	20.17	19.38	20.56	20.96	18.46	19.67	18.88	20.06	20.46
	12H	19.05	20.21	19.48	20.59	21.02	18.54	19.70	18.97	20.08	20.51
4H	2H	16.51	17.88	16.91	18.23	18.60	16.16	17.53	16.56	17.88	18.25
	3H	18.49	19.63	18.90	20.03	20.43	18.08	19.23	18.49	19.62	20.02
	4H	19.26	20.30	19.69	20.71	21.15	18.84	19.88	19.27	20.29	20.73
	6H	19.86	20.76	20.31	21.21	21.66	19.43	20.33	19.88	20.77	21.23
	8H	20.05	20.90	20.51	21.34	21.80	19.61	20.46	20.07	20.90	21.37
	12H	20.18	20.94	20.66	21.42	21.89	19.73	20.49	20.21	20.96	21.43
8H	4H	19.54	20.38	20.00	20.83	21.29	19.16	20.01	19.62	20.45	20.92
	6H	20.25	20.95	20.74	21.44	21.92	19.87	20.57	20.36	21.06	21.54
	8H	20.51	21.14	21.02	21.65	22.13	20.12	20.75	20.63	21.26	21.74
	12H	20.71	21.27	21.22	21.76	22.32	20.30	20.85	20.80	21.35	21.91
12H	4H	19.56	20.32	20.04	20.80	21.27	19.20	19.96	19.68	20.43	20.90
	6H	20.30	20.93	20.81	21.43	21.92	19.93	20.56	20.44	21.07	21.55
	8H	20.61	21.17	21.12	21.66	22.22	20.23	20.79	20.74	21.28	21.84