

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: P930237

Luminaire Tested: DFN2DS-HX3F0-090DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930237
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-HX3F0-090DS830-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

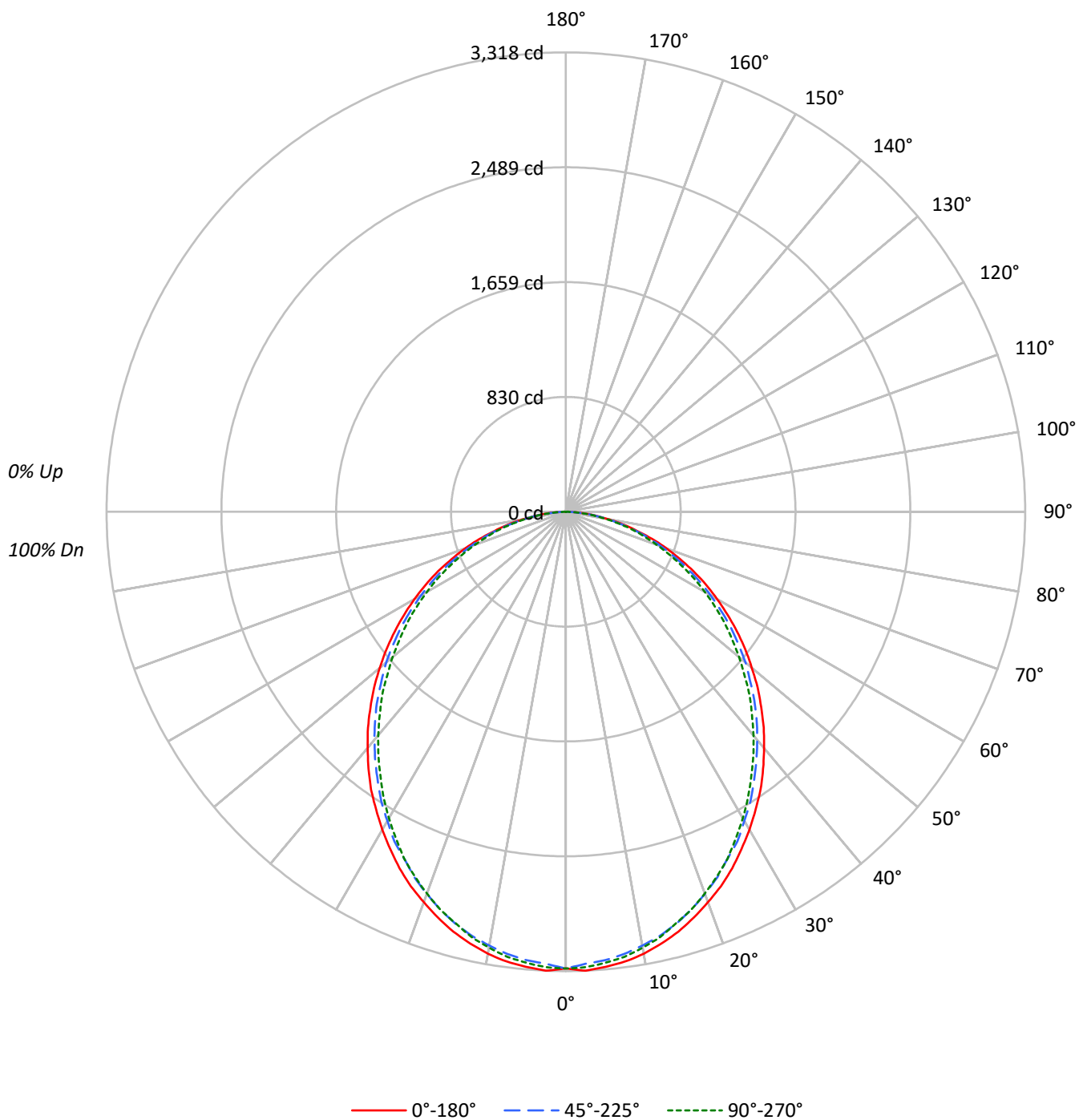
Lumens per Lamp: N/A
Luminaire Lumens: 8393.2 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3821	3821	3821
5°	3836	3781	3803
10°	3813	3742	3761
15°	3766	3694	3690
20°	3699	3621	3617
25°	3632	3532	3532
30°	3547	3449	3420
35°	3467	3351	3301
40°	3367	3252	3190
45°	3269	3154	3076
50°	3161	3052	2944
55°	3050	2934	2826
60°	2925	2793	2690
65°	2791	2652	2530
70°	2621	2482	2364
75°	2385	2285	2229
80°	2117	2052	1947
85°	1726	1647	1477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3269 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.5	3.7
10°-20°	873.6	10.4
20°-30°	1283.8	15.3
30°-40°	1491.1	17.8
40°-50°	1489.3	17.7
50°-60°	1298.6	15.5
60°-70°	959.9	11.4
70°-80°	543.1	6.5
80°-90°	143.4	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°	2467.9	29.4
0°-40°	3959.0	47.2
0°-60°	6746.8	80.4
0°-90°	8393.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8393.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3299	3299	3299	3299	3299	
5°	3299	3286	3251	3277	3270	313
15°	3140	3122	3080	3093	3077	884
25°	2842	2817	2763	2769	2763	1308
35°	2452	2420	2370	2350	2335	1531
45°	1995	1973	1925	1891	1878	1540
55°	1510	1491	1453	1415	1399	1350
65°	1018	999	968	939	923	1007
75°	533	527	511	492	498	569
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°	3298.8	3298.8	3298.8	3298.8	3298.8
2.5°	3318.0	3302.2	3267.2	3298.8	3292.8
5°	3298.8	3286.4	3251.4	3276.7	3270.5
7.5°	3276.7	3257.8	3222.8	3248.4	3242.0
10°	3242.0	3219.8	3181.7	3206.9	3197.5
12.5°	3194.1	3175.3	3137.3	3153.1	3146.8
15°	3140.3	3121.5	3080.1	3092.9	3077.0
17.5°	3073.7	3054.8	3013.5	3029.3	3013.5
20°	3000.6	2981.8	2937.3	2946.8	2934.3
22.5°	2927.9	2899.4	2857.9	2857.9	2851.5
25°	2842.1	2816.9	2763.1	2769.1	2763.1
27.5°	2746.9	2724.6	2683.7	2674.2	2658.4
30°	2652.0	2626.4	2578.9	2569.5	2556.8
32.5°	2550.4	2531.5	2480.7	2461.5	2448.7
35°	2452.1	2420.5	2369.6	2350.5	2334.7
37.5°	2341.1	2312.4	2261.6	2239.4	2223.6
40°	2226.9	2201.4	2150.5	2122.2	2109.5
42.5°	2115.8	2090.3	2039.8	2007.9	1989.0
45°	1995.3	1973.2	1925.4	1890.7	1878.0
47.5°	1878.0	1855.7	1804.9	1769.9	1751.1
50°	1754.1	1738.3	1693.8	1649.4	1633.6
52.5°	1633.6	1611.4	1570.3	1535.4	1513.1
55°	1510.1	1490.9	1452.8	1414.9	1399.1
57.5°	1386.2	1370.4	1329.1	1291.0	1278.2
60°	1262.4	1249.9	1205.5	1170.5	1161.1
62.5°	1141.9	1119.7	1088.0	1056.5	1043.6
65°	1018.4	999.2	967.5	939.0	923.2
67.5°	891.5	875.4	847.0	824.9	812.1
70°	774.0	761.2	732.7	710.5	698.0
72.5°	653.6	640.7	624.9	602.8	593.4
75°	532.8	526.7	510.6	491.7	498.1
77.5°	425.0	412.3	405.9	396.5	387.1
80°	317.4	314.0	307.6	298.1	291.8
82.5°	215.7	215.7	212.7	199.9	199.9
85°	129.9	126.9	123.9	114.1	111.1
87.5°	57.2	50.8	44.5	35.0	31.7
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	15.94	17.55	16.30	17.86	18.18	15.50	17.11	15.86	17.42	17.73
	3H	17.69	19.14	18.07	19.47	19.83	17.20	18.65	17.58	18.98	19.34
	4H	18.34	19.71	18.73	20.05	20.43	17.84	19.21	18.24	19.56	19.93
	6H	18.81	20.07	19.22	20.44	20.83	18.30	19.57	18.72	19.94	20.33
	8H	18.95	20.16	19.37	20.55	20.95	18.45	19.66	18.87	20.05	20.44
	12H	19.04	20.20	19.47	20.58	21.01	18.53	19.69	18.96	20.07	20.50
4H	2H	16.50	17.87	16.90	18.22	18.59	16.15	17.52	16.55	17.86	18.24
	3H	18.48	19.62	18.89	20.02	20.42	18.07	19.22	18.48	19.61	20.01
	4H	19.25	20.29	19.68	20.70	21.14	18.83	19.86	19.26	20.28	20.71
	6H	19.85	20.75	20.30	21.19	21.65	19.42	20.32	19.87	20.76	21.22
	8H	20.04	20.88	20.50	21.33	21.79	19.60	20.45	20.06	20.89	21.35
	12H	20.17	20.93	20.65	21.41	21.88	19.72	20.48	20.20	20.95	21.42
8H	4H	19.53	20.37	19.99	20.81	21.28	19.15	20.00	19.61	20.44	20.91
	6H	20.24	20.94	20.73	21.43	21.91	19.86	20.56	20.35	21.05	21.53
	8H	20.50	21.13	21.01	21.64	22.12	20.11	20.74	20.62	21.24	21.73
	12H	20.70	21.26	21.21	21.75	22.31	20.29	20.84	20.79	21.33	21.90
12H	4H	19.55	20.31	20.03	20.79	21.26	19.19	19.95	19.67	20.42	20.89
	6H	20.28	20.92	20.79	21.42	21.91	19.92	20.55	20.43	21.06	21.54
	8H	20.60	21.16	21.11	21.65	22.21	20.22	20.78	20.73	21.27	21.83