

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: P930615

Luminaire Tested: DFN2DS-PN3F0-090DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930615
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-PN3F0-090DS830-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

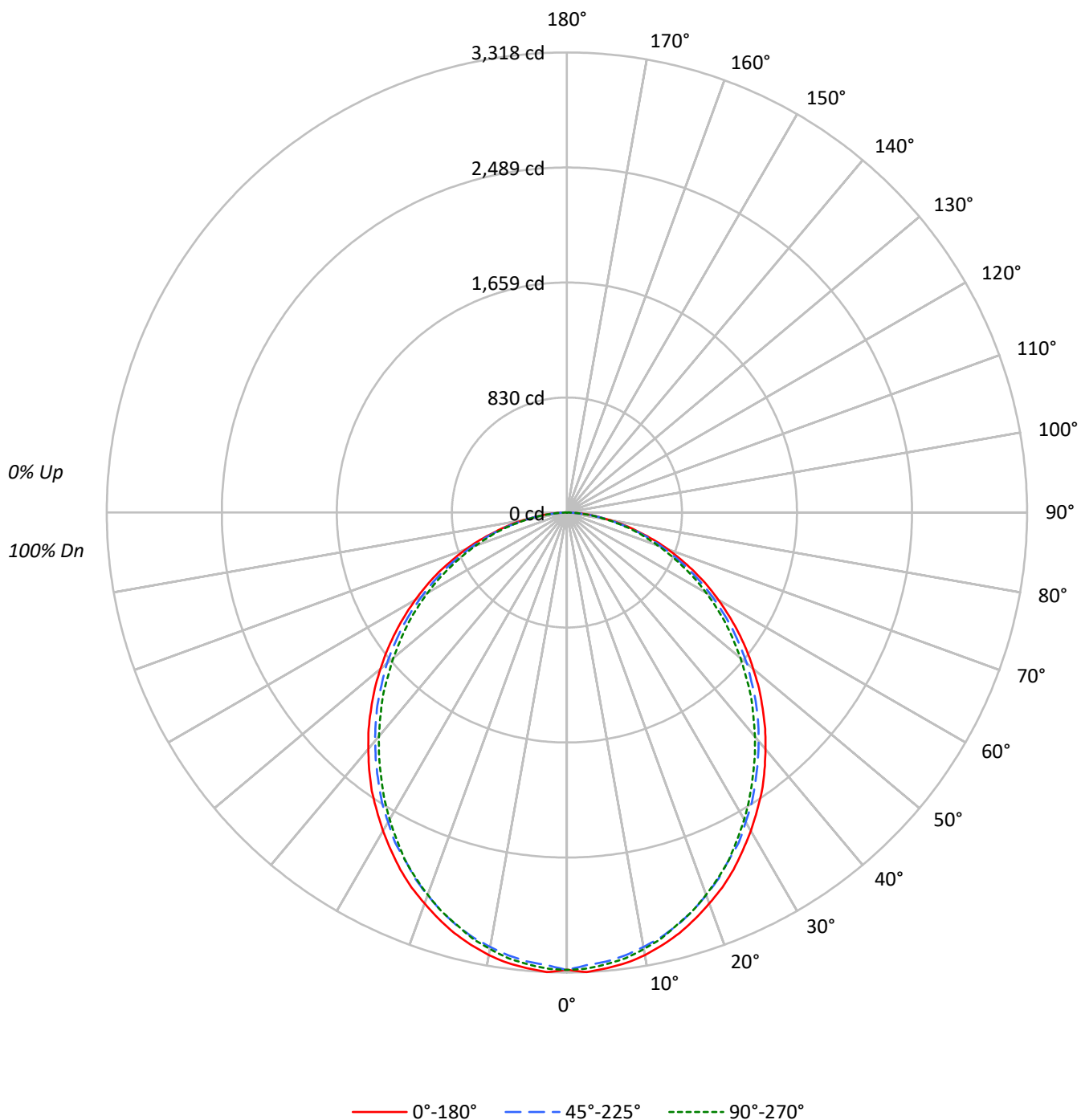
Lumens per Lamp: N/A
Luminaire Lumens: 8393.2 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	3856	3856	3856
5°	3871	3815	3838
10°	3848	3777	3795
15°	3800	3728	3724
20°	3733	3654	3650
25°	3666	3564	3564
30°	3580	3481	3451
35°	3499	3382	3332
40°	3398	3282	3219
45°	3299	3183	3105
50°	3190	3080	2971
55°	3078	2961	2851
60°	2951	2818	2715
65°	2817	2676	2554
70°	2645	2504	2386
75°	2406	2306	2250
80°	2137	2071	1964
85°	1742	1662	1490

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3299 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	15.97	17.58	16.34	17.90	18.21	15.53	17.14	15.89	17.45	17.77
	3H	17.72	19.18	18.10	19.50	19.86	17.23	18.69	17.61	19.01	19.37
	4H	18.37	19.74	18.77	20.09	20.46	17.87	19.24	18.27	19.59	19.97
	6H	18.84	20.11	19.25	20.47	20.86	18.34	19.60	18.75	19.97	20.36
	8H	18.98	20.19	19.41	20.58	20.98	18.48	19.69	18.90	20.08	20.48
	12H	19.07	20.23	19.50	20.61	21.04	18.56	19.72	18.99	20.10	20.53
4H	2H	16.53	17.90	16.93	18.25	18.63	16.18	17.55	16.58	17.90	18.27
	3H	18.51	19.65	18.92	20.05	20.45	18.10	19.25	18.51	19.64	20.04
	4H	19.28	20.32	19.72	20.73	21.17	18.86	19.90	19.29	20.31	20.75
	6H	19.88	20.79	20.33	21.23	21.68	19.45	20.35	19.90	20.79	21.25
	8H	20.07	20.92	20.53	21.36	21.82	19.63	20.48	20.09	20.92	21.39
	12H	20.20	20.96	20.68	21.44	21.91	19.75	20.51	20.23	20.99	21.45
8H	4H	19.56	20.40	20.02	20.85	21.31	19.18	20.03	19.64	20.47	20.94
	6H	20.27	20.97	20.77	21.46	21.94	19.89	20.59	20.38	21.08	21.56
	8H	20.53	21.16	21.04	21.67	22.15	20.14	20.77	20.65	21.28	21.76
	12H	20.73	21.29	21.24	21.78	22.34	20.32	20.88	20.82	21.37	21.93
12H	4H	19.58	20.34	20.06	20.82	21.29	19.22	19.98	19.70	20.45	20.92
	6H	20.32	20.95	20.83	21.46	21.94	19.95	20.58	20.46	21.09	21.57
	8H	20.63	21.19	21.14	21.68	22.24	20.25	20.81	20.76	21.30	21.86