

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: P930597

Luminaire Tested: DFN2DS-PN3F0-080DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930597
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-PN3F0-080DS830-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

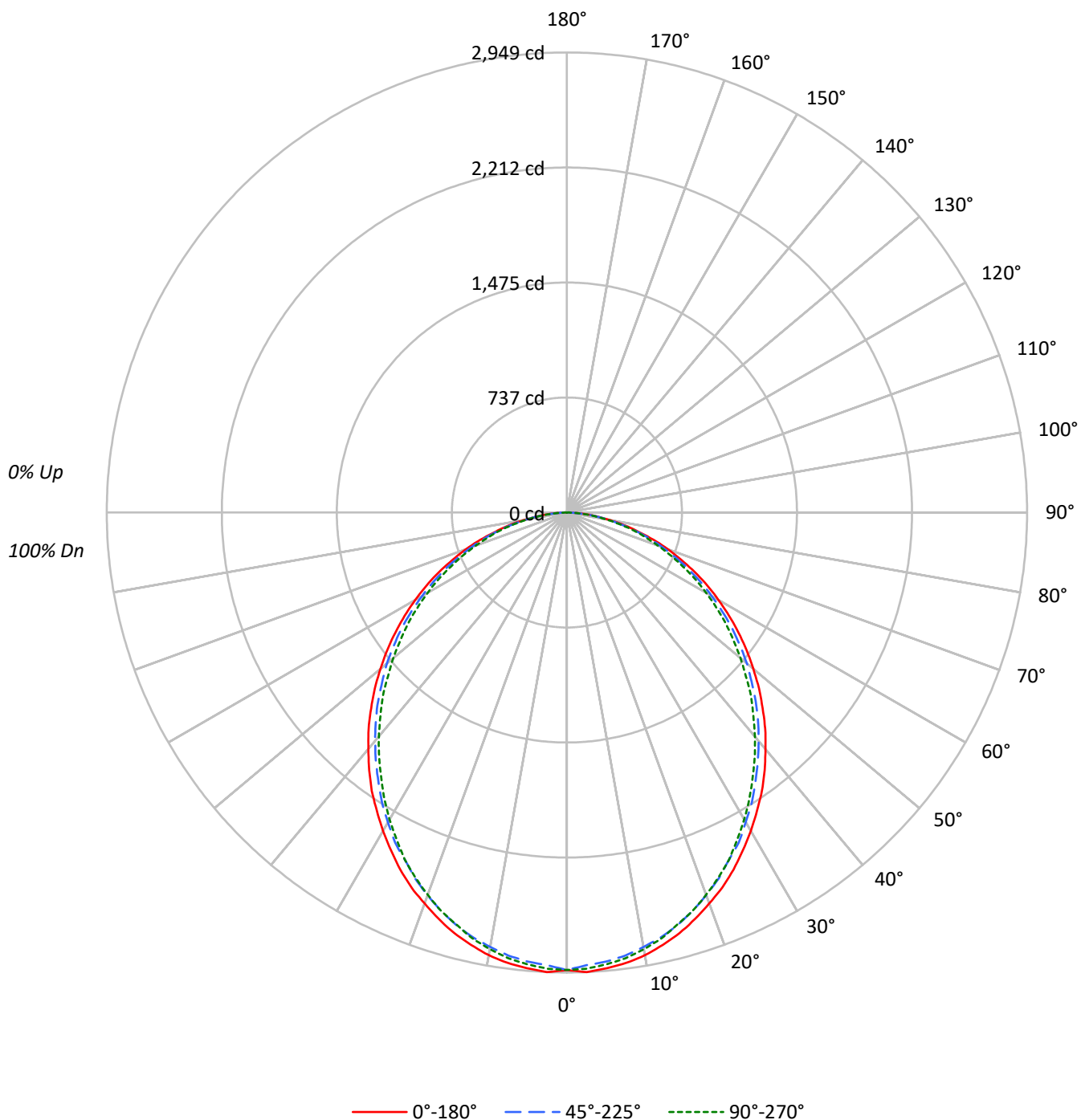
Lumens per Lamp: N/A
Luminaire Lumens: 7460.7 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 84.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9967
Total Harmonic Distortion (THDi): 0.063
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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3428	3428	3428
5°	3441	3391	3411
10°	3421	3357	3374
15°	3378	3313	3310
20°	3318	3248	3245
25°	3258	3168	3168
30°	3182	3094	3068
35°	3110	3006	2961
40°	3021	2917	2861
45°	2932	2829	2760
50°	2836	2738	2641
55°	2736	2632	2534
60°	2623	2505	2413
65°	2504	2379	2270
70°	2351	2226	2120
75°	2139	2050	1999
80°	1899	1841	1746
85°	1549	1477	1324

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2932 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.0	3.7
10°-20°	776.5	10.4
20°-30°	1141.2	15.3
30°-40°	1325.4	17.8
40°-50°	1323.8	17.7
50°-60°	1154.3	15.5
60°-70°	853.3	11.4
70°-80°	482.8	6.5
80°-90°	127.4	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°	2193.7	29.4
0°-40°	3519.1	47.2
0°-60°	5997.2	80.4
0°-90°	7460.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7460.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2932	2932	2932	2932	2932	
5°	2932	2921	2890	2913	2907	278
15°	2791	2775	2738	2749	2735	786
25°	2526	2504	2456	2461	2456	1163
35°	2180	2152	2106	2089	2075	1361
45°	1774	1754	1711	1681	1669	1369
55°	1342	1325	1292	1258	1244	1200
65°	905	888	860	835	821	895
75°	474	468	454	437	443	505
85°	116	113	110	102	99	136
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2949.3	2935.3	2904.2	2932.3	2926.9
5°	2932.3	2921.2	2890.2	2912.6	2907.2
7.5°	2912.6	2895.8	2864.7	2887.4	2881.8
10°	2881.8	2862.0	2828.2	2850.6	2842.3
12.5°	2839.3	2822.5	2788.7	2802.7	2797.1
15°	2791.4	2774.7	2737.8	2749.2	2735.2
17.5°	2732.2	2715.4	2678.6	2692.7	2678.6
20°	2667.3	2650.5	2611.0	2619.4	2608.3
22.5°	2602.7	2577.2	2540.4	2540.4	2534.7
25°	2526.3	2503.9	2456.1	2461.4	2456.1
27.5°	2441.7	2422.0	2385.4	2377.0	2363.0
30°	2357.4	2334.6	2292.5	2284.1	2272.7
32.5°	2267.0	2250.2	2205.0	2188.0	2176.7
35°	2179.6	2151.5	2106.3	2089.3	2075.2
37.5°	2080.9	2055.4	2010.3	1990.5	1976.5
40°	1979.5	1956.7	1911.6	1886.4	1875.1
42.5°	1880.8	1858.0	1813.2	1784.7	1768.0
45°	1773.7	1753.9	1711.4	1680.6	1669.3
47.5°	1669.3	1649.5	1604.3	1573.2	1556.5
50°	1559.2	1545.2	1505.6	1466.1	1452.1
52.5°	1452.1	1432.3	1395.9	1364.8	1345.0
55°	1342.3	1325.2	1291.5	1257.7	1243.5
57.5°	1232.2	1218.2	1181.4	1147.5	1136.1
60°	1122.1	1111.1	1071.5	1040.4	1032.1
62.5°	1015.0	995.3	967.2	939.1	927.7
65°	905.3	888.2	860.0	834.6	820.6
67.5°	792.4	778.1	752.9	733.3	721.9
70°	688.0	676.6	651.3	631.5	620.4
72.5°	580.9	569.6	555.5	535.8	527.4
75°	473.5	468.2	453.9	437.1	442.7
77.5°	377.8	366.4	360.8	352.4	344.0
80°	282.1	279.1	273.5	265.1	259.3
82.5°	191.8	191.8	189.1	177.7	177.7
85°	115.5	112.8	110.1	101.5	98.7
87.5°	50.9	45.2	39.5	31.1	28.2
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	15.56	17.17	15.93	17.49	17.80	15.12	16.73	15.48	17.04	17.36
	3H	17.31	18.77	17.69	19.09	19.45	16.82	18.28	17.20	18.60	18.96
	4H	17.96	19.33	18.36	19.68	20.05	17.46	18.83	17.86	19.18	19.56
	6H	18.43	19.70	18.84	20.06	20.45	17.93	19.20	18.34	19.56	19.95
	8H	18.57	19.78	19.00	20.17	20.57	18.07	19.28	18.49	19.67	20.07
	12H	18.66	19.82	19.09	20.20	20.63	18.15	19.31	18.58	19.69	20.12
4H	2H	16.12	17.49	16.52	17.84	18.22	15.77	17.14	16.17	17.49	17.86
	3H	18.10	19.24	18.51	19.64	20.04	17.69	18.84	18.10	19.24	19.64
	4H	18.87	19.91	19.31	20.32	20.76	18.45	19.49	18.88	19.90	20.34
	6H	19.47	20.38	19.93	20.82	21.27	19.04	19.94	19.49	20.38	20.84
	8H	19.66	20.51	20.12	20.95	21.41	19.22	20.07	19.68	20.51	20.98
	12H	19.79	20.55	20.27	21.03	21.50	19.34	20.10	19.82	20.58	21.05
8H	4H	19.15	19.99	19.61	20.44	20.90	18.77	19.62	19.23	20.06	20.53
	6H	19.86	20.57	20.36	21.05	21.53	19.48	20.18	19.97	20.67	21.15
	8H	20.12	20.75	20.63	21.26	21.75	19.73	20.36	20.24	20.87	21.35
	12H	20.32	20.88	20.83	21.37	21.93	19.91	20.47	20.42	20.96	21.52
12H	4H	19.17	19.93	19.65	20.41	20.88	18.81	19.57	19.29	20.05	20.51
	6H	19.91	20.54	20.42	21.05	21.53	19.54	20.17	20.05	20.68	21.16
	8H	20.22	20.78	20.73	21.27	21.83	19.84	20.40	20.35	20.89	21.45