

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: P931037

Luminaire Tested: DFN2DS-SQ3F0-110DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931037
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-SQ3F0-110DS927-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

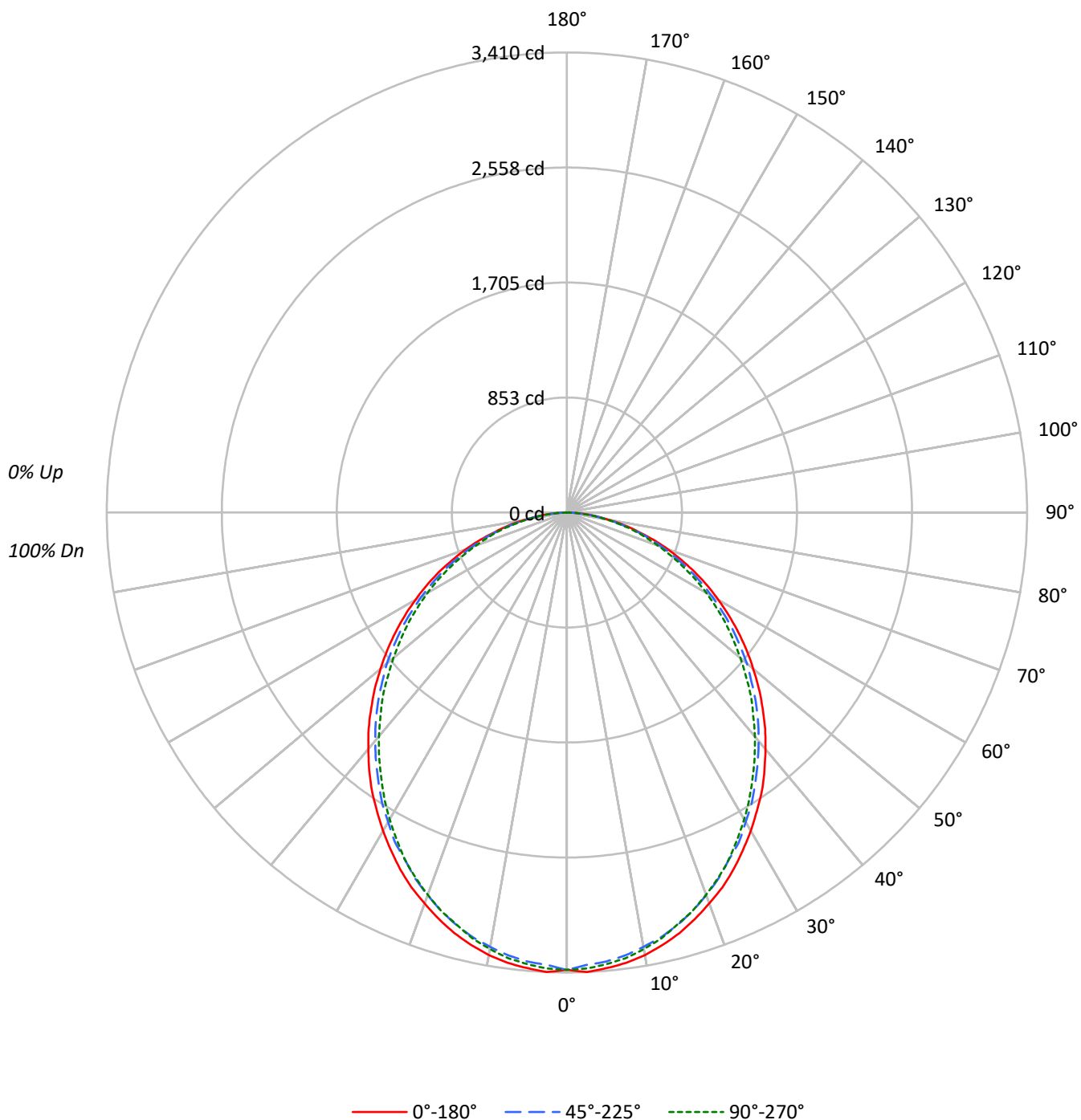
Lumens per Lamp: N/A
Luminaire Lumens: 8624.9 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 117.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
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°	3884	3884	3884
5°	3899	3843	3866
10°	3876	3804	3823
15°	3828	3755	3751
20°	3760	3681	3677
25°	3692	3590	3590
30°	3606	3506	3476
35°	3524	3406	3356
40°	3423	3305	3242
45°	3323	3206	3127
50°	3213	3103	2992
55°	3100	2982	2872
60°	2973	2839	2734
65°	2837	2696	2572
70°	2665	2522	2403
75°	2423	2322	2266
80°	2152	2086	1979
85°	1755	1674	1500

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3323 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.1	3.7
10°-20°	897.7	10.4
20°-30°	1319.3	15.3
30°-40°	1532.2	17.8
40°-50°	1530.4	17.7
50°-60°	1334.4	15.5
60°-70°	986.4	11.4
70°-80°	558.1	6.5
80°-90°	147.3	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°	2536.0	29.4
0°-40°	4068.3	47.2
0°-60°	6933.0	80.4
0°-90°	8624.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8624.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3390	3390	3390	3390	3390	
5°	3390	3377	3341	3367	3361	322
15°	3227	3208	3165	3178	3162	909
25°	2921	2895	2839	2846	2839	1344
35°	2520	2487	2435	2415	2399	1573
45°	2050	2028	1978	1943	1930	1582
55°	1552	1532	1493	1454	1438	1387
65°	1046	1027	994	965	949	1035
75°	547	541	525	505	512	584
85°	134	130	127	117	114	157
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3389.9	3389.9	3389.9	3389.9	3389.9
2.5°	3409.6	3393.3	3357.4	3389.9	3383.7
5°	3389.9	3377.1	3341.1	3367.0	3360.9
7.5°	3367.0	3347.7	3311.7	3338.0	3331.5
10°	3331.5	3308.6	3269.5	3295.4	3285.8
12.5°	3282.4	3263.0	3223.9	3240.2	3233.6
15°	3227.0	3207.6	3165.1	3178.2	3162.0
17.5°	3158.5	3139.2	3096.6	3112.9	3096.6
20°	3083.5	3064.1	3018.5	3028.1	3015.4
22.5°	3008.8	2979.3	2936.8	2936.8	2930.2
25°	2920.6	2894.7	2839.3	2845.6	2839.3
27.5°	2822.7	2799.9	2757.7	2748.0	2731.8
30°	2725.2	2698.9	2650.1	2640.4	2627.3
32.5°	2620.7	2601.4	2549.1	2529.4	2516.3
35°	2519.7	2487.3	2435.0	2415.3	2399.0
37.5°	2405.6	2376.2	2324.0	2301.2	2284.9
40°	2288.4	2262.1	2209.9	2180.9	2167.7
42.5°	2174.3	2148.0	2096.1	2063.2	2043.9
45°	2050.5	2027.6	1978.5	1942.9	1929.8
47.5°	1929.8	1907.0	1854.7	1818.7	1799.3
50°	1802.5	1786.3	1740.6	1695.0	1678.7
52.5°	1678.7	1655.8	1613.7	1577.7	1554.9
55°	1551.8	1532.0	1493.0	1453.9	1437.6
57.5°	1424.5	1408.3	1365.7	1326.6	1313.5
60°	1297.2	1284.5	1238.8	1202.8	1193.1
62.5°	1173.4	1150.6	1118.1	1085.6	1072.4
65°	1046.5	1026.7	994.3	964.9	948.7
67.5°	916.1	899.6	870.5	847.7	834.5
70°	795.4	782.3	752.9	730.1	717.2
72.5°	671.6	658.5	642.2	619.4	609.7
75°	547.4	541.3	524.6	505.3	511.9
77.5°	436.8	423.6	417.1	407.4	397.7
80°	326.1	322.7	316.1	306.4	299.9
82.5°	221.7	221.7	218.6	205.4	205.4
85°	133.5	130.4	127.3	117.2	114.1
87.5°	58.8	52.2	45.6	36.0	32.5
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	16.00	17.61	16.36	17.92	18.24	15.55	17.16	15.92	17.48	17.79
	3H	17.75	19.20	18.12	19.53	19.89	17.26	18.71	17.63	19.04	19.40
	4H	18.39	19.76	18.79	20.11	20.49	17.90	19.27	18.30	19.62	19.99
	6H	18.86	20.13	19.27	20.50	20.89	18.36	19.63	18.77	19.99	20.39
	8H	19.01	20.22	19.43	20.61	21.00	18.50	19.71	18.93	20.10	20.50
	12H	19.10	20.26	19.53	20.64	21.07	18.58	19.74	19.01	20.13	20.55
4H	2H	16.56	17.93	16.96	18.27	18.65	16.20	17.57	16.60	17.92	18.30
	3H	18.53	19.68	18.94	20.08	20.48	18.13	19.27	18.54	19.67	20.07
	4H	19.31	20.35	19.74	20.76	21.19	18.89	19.92	19.32	20.33	20.77
	6H	19.91	20.81	20.36	21.25	21.71	19.47	20.38	19.93	20.82	21.27
	8H	20.10	20.94	20.56	21.38	21.85	19.66	20.50	20.12	20.95	21.41
	12H	20.23	20.99	20.71	21.46	21.93	19.77	20.53	20.25	21.01	21.48
8H	4H	19.58	20.43	20.04	20.87	21.34	19.21	20.05	19.67	20.50	20.96
	6H	20.30	21.00	20.79	21.49	21.96	19.92	20.62	20.41	21.11	21.58
	8H	20.56	21.19	21.07	21.69	22.18	20.16	20.79	20.67	21.30	21.79
	12H	20.76	21.31	21.26	21.80	22.37	20.34	20.90	20.85	21.39	21.95
12H	4H	19.61	20.37	20.09	20.84	21.31	19.24	20.00	19.72	20.48	20.95
	6H	20.34	20.97	20.85	21.48	21.97	19.97	20.61	20.48	21.11	21.60
	8H	20.66	21.21	21.16	21.70	22.27	20.28	20.84	20.78	21.33	21.89