

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: P931577

Luminaire Tested: DFN2DS-TR4F0-110DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931577
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-TR4F0-110DS927-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

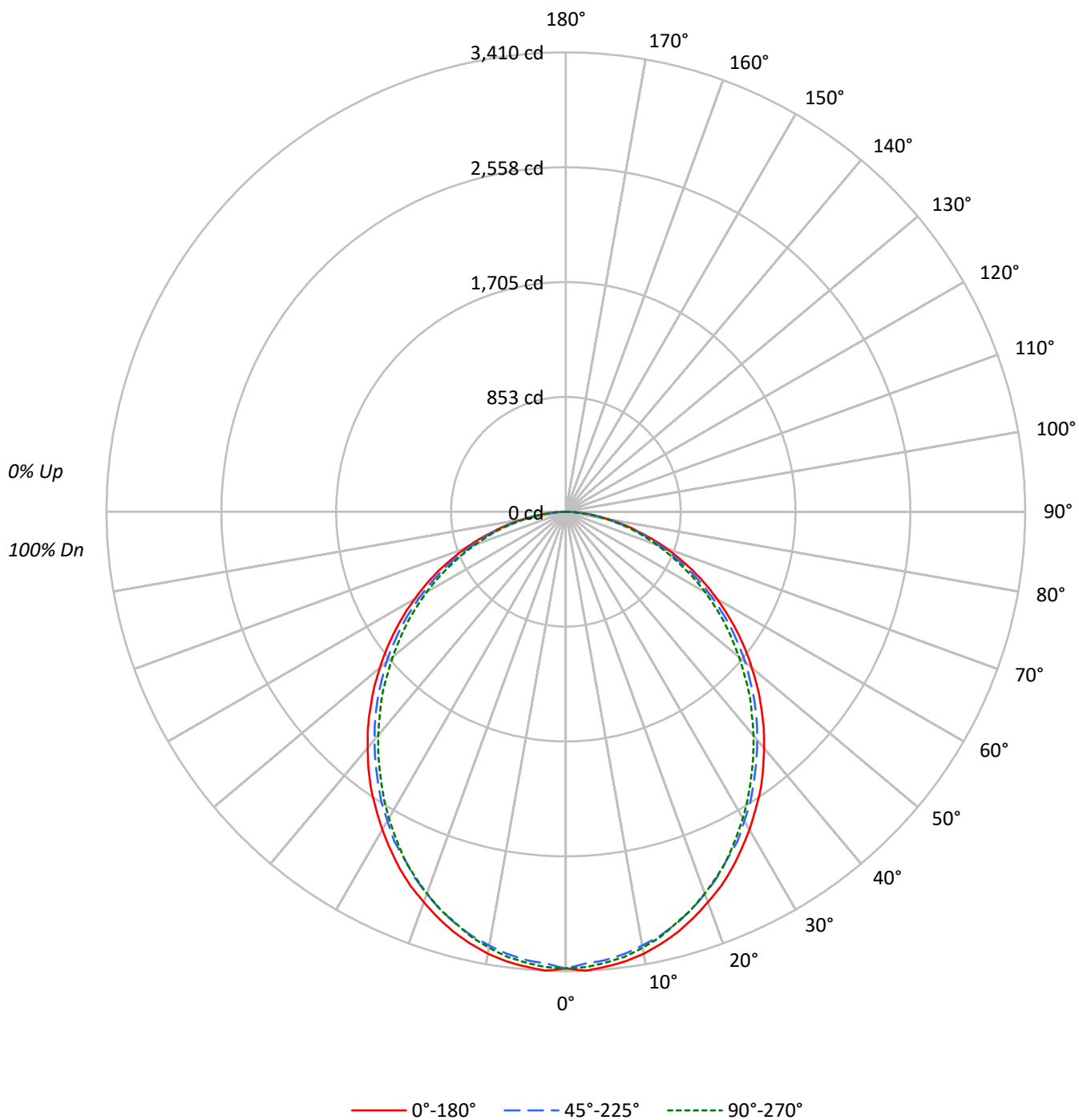
Lumens per Lamp: N/A
Luminaire Lumens: 8624.9 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 118.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
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°	2693	2693	2693
5°	2703	2664	2680
10°	2687	2637	2651
15°	2654	2603	2601
20°	2607	2552	2549
25°	2560	2489	2489
30°	2500	2431	2410
35°	2444	2362	2327
40°	2373	2292	2248
45°	2304	2223	2168
50°	2228	2151	2075
55°	2149	2068	1991
60°	2061	1968	1896
65°	1967	1869	1783
70°	1848	1749	1666
75°	1680	1610	1571
80°	1492	1446	1372
85°	1217	1160	1040

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2304 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	14.72	16.34	15.09	16.65	16.96	14.28	15.89	14.64	16.20	16.52
	3H	16.47	17.93	16.85	18.26	18.62	15.98	17.44	16.36	17.76	18.13
	4H	17.12	18.49	17.52	18.84	19.21	16.63	18.00	17.02	18.34	18.72
	6H	17.59	18.86	18.00	19.22	19.61	17.09	18.36	17.50	18.72	19.11
	8H	17.73	18.94	18.16	19.33	19.73	17.23	18.44	17.65	18.83	19.23
	12H	17.82	18.98	18.25	19.37	19.79	17.31	18.47	17.74	18.85	19.28
4H	2H	15.29	16.65	15.68	17.00	17.38	14.93	16.30	15.33	16.65	17.02
	3H	17.26	18.41	17.67	18.80	19.20	16.85	18.00	17.26	18.40	18.80
	4H	18.04	19.07	18.47	19.49	19.92	17.61	18.65	18.04	19.06	19.50
	6H	18.63	19.54	19.09	19.98	20.43	18.20	19.11	18.66	19.55	20.00
	8H	18.82	19.67	19.28	20.11	20.58	18.38	19.23	18.85	19.67	20.14
	12H	18.95	19.71	19.43	20.19	20.66	18.50	19.26	18.98	19.74	20.21
8H	4H	18.31	19.16	18.77	19.60	20.06	17.94	18.78	18.40	19.22	19.69
	6H	19.02	19.73	19.52	20.22	20.69	18.64	19.35	19.14	19.83	20.31
	8H	19.28	19.91	19.79	20.42	20.91	18.89	19.52	19.40	20.03	20.52
	12H	19.48	20.04	19.99	20.53	21.09	19.07	19.63	19.58	20.12	20.68
12H	4H	18.34	19.10	18.82	19.57	20.04	17.97	18.73	18.45	19.21	19.68
	6H	19.07	19.70	19.58	20.21	20.69	18.70	19.33	19.21	19.84	20.33
	8H	19.38	19.94	19.89	20.43	20.99	19.01	19.56	19.51	20.05	20.62