

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: P931518

Luminaire Tested: DFN2DS-TR4F0-080DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-080DS835-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

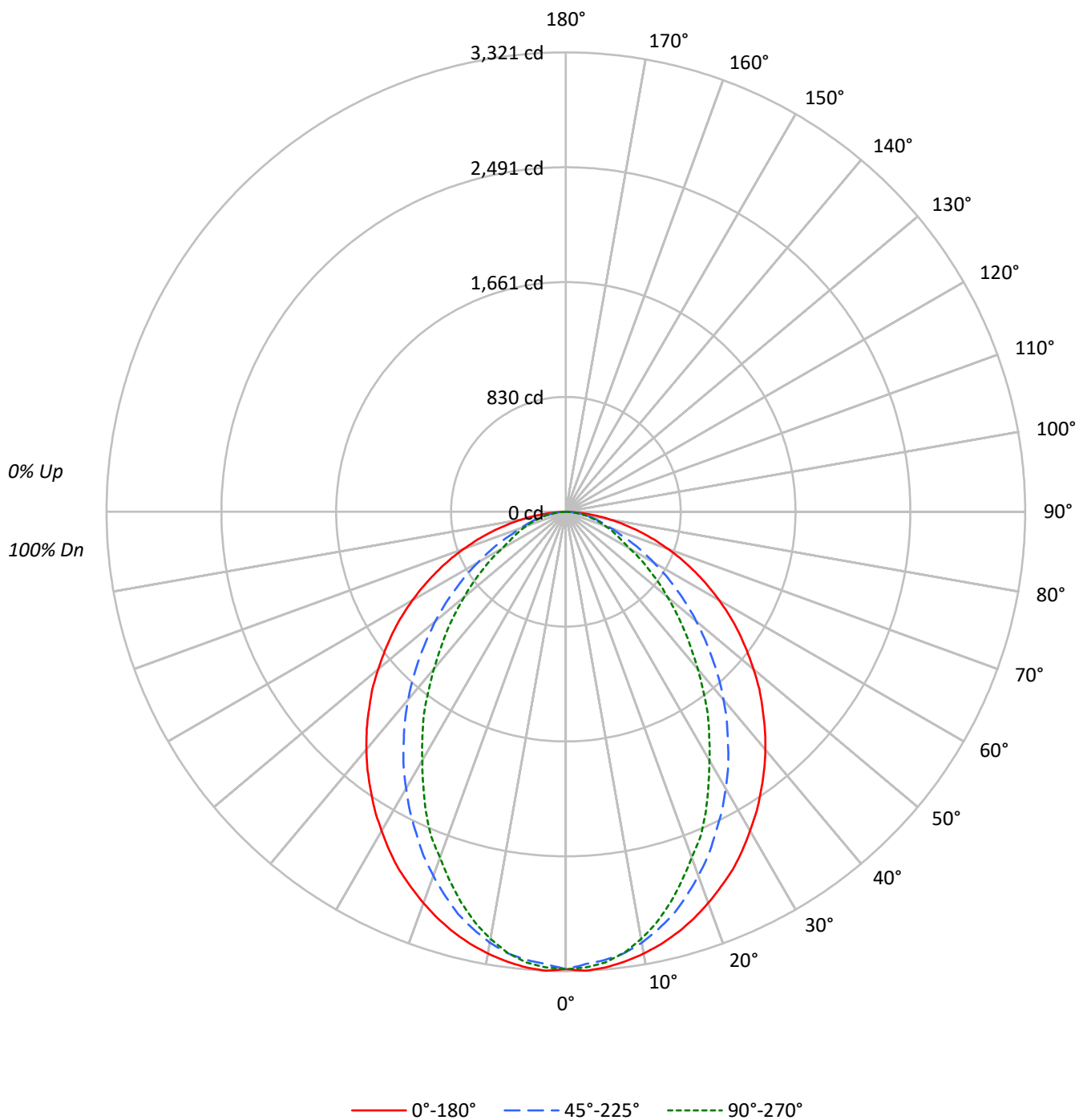
Lumens per Lamp: N/A
Luminaire Lumens: 6800.0 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 81.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2627	2627	2627
5°	2637	2594	2608
10°	2616	2551	2530
15°	2586	2476	2404
20°	2545	2368	2249
25°	2502	2245	2098
30°	2443	2119	1905
35°	2385	1982	1735
40°	2327	1840	1539
45°	2259	1681	1361
50°	2189	1520	1187
55°	2118	1347	1020
60°	2035	1165	846
65°	1941	979	770
70°	1828	806	709
75°	1690	735	662
80°	1491	657	603
85°	1172	518	518

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2259 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.9	4.6
10°-20°	850.7	12.5
20°-30°	1194.3	17.6
30°-40°	1301.9	19.1
40°-50°	1196.6	17.6
50°-60°	939.7	13.8
60°-70°	611.7	9.0
70°-80°	314.9	4.6
80°-90°	80.4	1.2
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°	2354.9	34.6
0°-40°	3656.8	53.8
0°-60°	5793.1	85.2
0°-90°	6800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6800.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3306	3306	3306	3306	3306	
5°	3306	3292	3252	3279	3270	314
15°	3145	3112	3010	2953	2924	886
25°	2855	2759	2561	2439	2394	1313
35°	2460	2307	2044	1855	1789	1540
45°	2011	1810	1496	1284	1212	1553
55°	1529	1296	972	793	736	1366
65°	1032	790	521	419	410	1024
75°	550	341	239	218	216	582
85°	129	66	57	57	57	154
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3306.4	3306.4	3306.4	3306.4	3306.4
2.5°	3321.3	3306.4	3273.4	3303.5	3297.5
5°	3306.4	3291.5	3252.4	3279.4	3270.5
7.5°	3279.4	3261.6	3219.7	3231.5	3216.5
10°	3243.5	3222.6	3162.9	3153.7	3135.9
12.5°	3198.8	3171.8	3090.8	3073.0	3040.0
15°	3144.8	3111.8	3010.2	2953.4	2923.5
17.5°	3081.9	3034.0	2908.3	2842.6	2794.6
20°	3010.2	2950.2	2800.7	2726.1	2660.0
22.5°	2932.4	2863.5	2689.9	2588.3	2543.5
25°	2854.6	2758.8	2561.3	2438.8	2393.7
27.5°	2761.9	2660.0	2441.6	2301.0	2232.1
30°	2663.2	2549.2	2309.9	2157.5	2076.5
32.5°	2567.3	2429.6	2184.5	2004.8	1929.9
35°	2459.7	2307.0	2043.8	1855.3	1789.2
37.5°	2354.9	2190.2	1912.1	1705.4	1630.8
40°	2244.2	2064.8	1774.3	1561.9	1484.1
42.5°	2130.5	1939.1	1636.8	1415.3	1340.6
45°	2010.8	1810.2	1496.2	1283.5	1211.8
47.5°	1897.2	1684.8	1361.6	1148.9	1083.2
50°	1771.4	1559.1	1229.9	1023.2	960.6
52.5°	1648.6	1424.1	1104.1	906.7	849.9
55°	1528.9	1295.6	972.4	793.0	736.2
57.5°	1406.4	1167.0	855.9	688.3	640.3
60°	1280.6	1041.3	733.0	580.6	532.7
62.5°	1158.1	918.7	628.3	484.8	461.0
65°	1032.4	789.8	520.6	419.1	409.8
67.5°	912.7	670.2	419.1	367.9	359.1
70°	787.0	553.7	347.0	317.1	305.1
72.5°	667.3	445.7	290.2	266.4	260.3
75°	550.5	341.0	239.4	218.4	215.6
77.5°	434.0	242.2	188.6	176.5	170.5
80°	326.0	173.7	143.5	131.7	131.7
82.5°	227.3	116.8	98.7	92.7	92.7
85°	128.6	65.7	56.8	56.8	56.8
87.5°	47.9	23.8	23.8	21.0	21.0
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	14.59	16.11	14.95	16.43	16.74	10.55	12.07	10.92	12.39	12.70
	3H	16.36	17.72	16.73	18.05	18.41	11.82	13.18	12.19	13.51	13.87
	4H	17.02	18.30	17.42	18.65	19.03	12.32	13.60	12.72	13.95	14.33
	6H	17.51	18.69	17.92	19.06	19.45	12.70	13.88	13.11	14.25	14.64
	8H	17.68	18.80	18.10	19.19	19.59	12.82	13.95	13.25	14.34	14.74
	12H	17.78	18.86	18.21	19.24	19.67	12.90	13.98	13.33	14.36	14.79
4H	2H	14.69	15.97	15.09	16.32	16.70	11.25	12.53	11.65	12.88	13.25
	3H	16.63	17.69	17.04	18.09	18.49	12.69	13.75	13.10	14.15	14.55
	4H	17.38	18.33	17.81	18.75	19.19	13.29	14.25	13.72	14.66	15.10
	6H	17.97	18.80	18.43	19.24	19.70	13.78	14.61	14.23	15.05	15.51
	8H	18.18	18.96	18.65	19.40	19.87	13.94	14.72	14.40	15.16	15.63
	12H	18.34	19.03	18.82	19.51	19.98	14.06	14.75	14.54	15.23	15.70
8H	4H	17.40	18.18	17.86	18.62	19.09	13.64	14.42	14.11	14.86	15.33
	6H	18.04	18.68	18.54	19.17	19.65	14.23	14.87	14.73	15.36	15.84
	8H	18.29	18.87	18.80	19.38	19.86	14.45	15.03	14.96	15.54	16.02
	12H	18.49	19.00	19.00	19.49	20.06	14.63	15.14	15.14	15.63	16.20
12H	4H	17.39	18.08	17.87	18.56	19.03	13.69	14.38	14.17	14.86	15.33
	6H	18.02	18.60	18.53	19.11	19.59	14.29	14.87	14.81	15.38	15.87
	8H	18.30	18.81	18.81	19.31	19.87	14.57	15.08	15.08	15.57	16.13