

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: P929916

Luminaire Tested: DFN2DS-4P3F0-060DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929916
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-4P3F0-060DS835-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

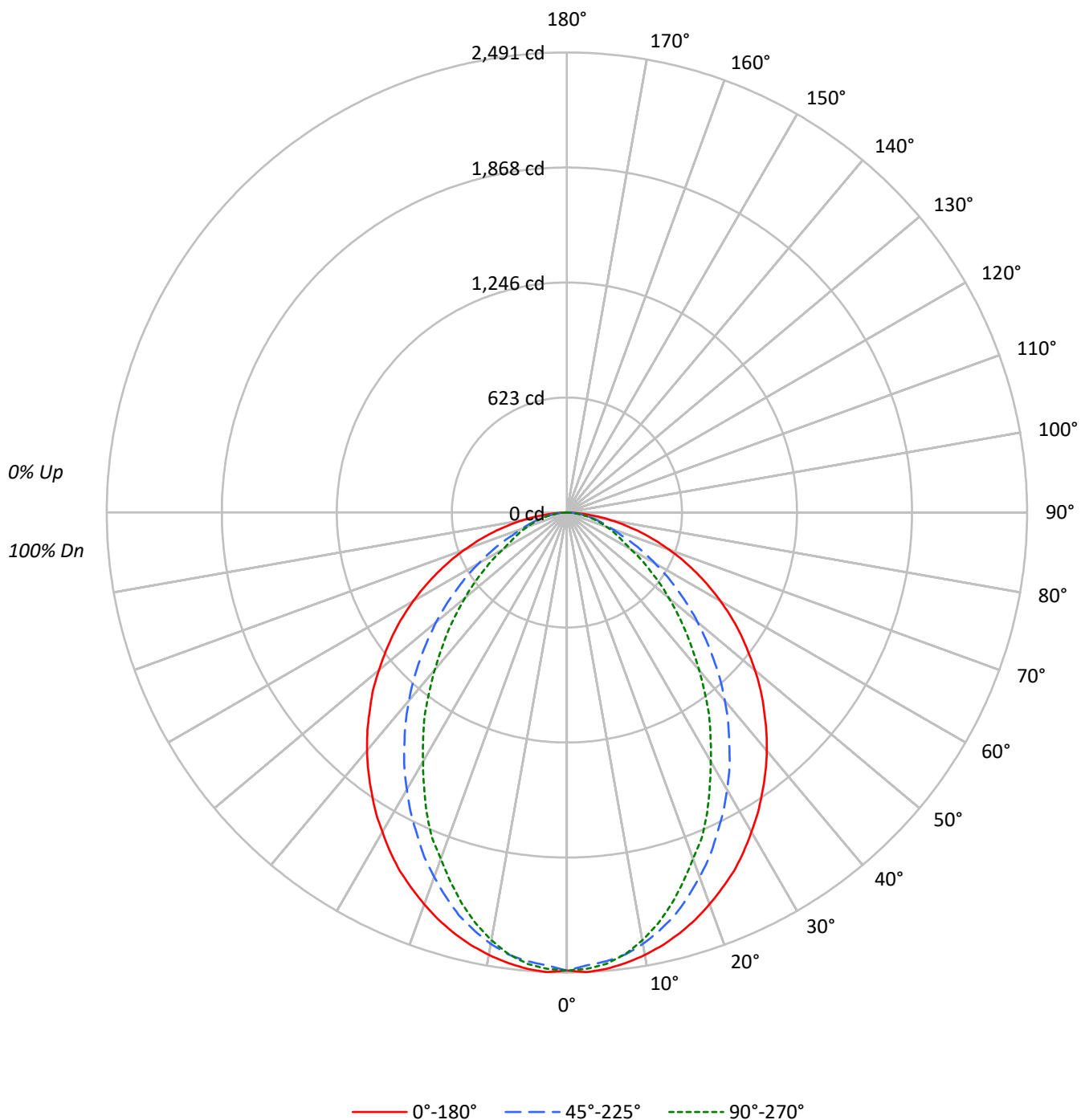
Lumens per Lamp: N/A
Luminaire Lumens: 5100.0 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 65
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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°	2826	2826	2826
5°	2837	2790	2806
10°	2815	2745	2722
15°	2783	2664	2587
20°	2738	2547	2419
25°	2692	2415	2257
30°	2628	2280	2049
35°	2566	2133	1867
40°	2504	1980	1656
45°	2431	1809	1465
50°	2355	1635	1277
55°	2278	1449	1097
60°	2189	1253	911
65°	2088	1053	829
70°	1967	867	762
75°	1818	790	712
80°	1605	706	648
85°	1260	557	557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2431 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.4	4.6
10°-20°	638.0	12.5
20°-30°	895.7	17.6
30°-40°	976.4	19.1
40°-50°	897.4	17.6
50°-60°	704.8	13.8
60°-70°	458.8	9.0
70°-80°	236.1	4.6
80°-90°	60.3	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°	1766.2	34.6
0°-40°	2742.6	53.8
0°-60°	4344.8	85.2
0°-90°	5100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2480	2480	2480	2480	2480	
5°	2480	2469	2439	2460	2453	235
15°	2359	2334	2258	2215	2193	665
25°	2141	2069	1921	1829	1795	985
35°	1845	1730	1533	1391	1342	1155
45°	1508	1358	1122	963	909	1165
55°	1147	972	729	595	552	1025
65°	774	592	390	314	307	768
75°	413	256	180	164	162	437
85°	96	49	43	43	43	116
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2479.8	2479.8	2479.8	2479.8	2479.8
2.5°	2491.0	2479.8	2455.0	2477.6	2473.1
5°	2479.8	2468.6	2439.3	2459.6	2452.9
7.5°	2459.6	2446.2	2414.8	2423.6	2412.4
10°	2432.6	2416.9	2372.2	2365.3	2351.9
12.5°	2399.1	2378.8	2318.1	2304.8	2280.0
15°	2358.6	2333.8	2257.6	2215.0	2192.6
17.5°	2311.5	2275.5	2181.2	2131.9	2096.0
20°	2257.6	2212.6	2100.5	2044.5	1995.0
22.5°	2199.3	2147.6	2017.4	1941.2	1907.6
25°	2141.0	2069.1	1921.0	1829.1	1795.3
27.5°	2071.5	1995.0	1831.2	1725.7	1674.1
30°	1997.4	1911.9	1732.4	1618.1	1557.4
32.5°	1925.5	1822.2	1638.4	1503.6	1447.4
35°	1844.8	1730.3	1532.9	1391.4	1341.9
37.5°	1766.2	1642.6	1434.1	1279.1	1223.1
40°	1683.1	1548.6	1330.7	1171.4	1113.1
42.5°	1597.9	1454.3	1227.6	1061.4	1005.5
45°	1508.1	1357.6	1122.2	962.6	908.8
47.5°	1422.9	1263.6	1021.2	861.7	812.4
50°	1328.6	1169.3	922.4	767.4	720.5
52.5°	1236.4	1068.1	828.1	680.0	637.4
55°	1146.7	971.7	729.3	594.8	552.1
57.5°	1054.8	875.2	641.9	516.2	480.2
60°	960.5	781.0	549.8	435.5	399.5
62.5°	868.6	689.1	471.2	363.6	345.7
65°	774.3	592.4	390.5	314.3	307.4
67.5°	684.5	502.6	314.3	276.0	269.3
70°	590.2	415.2	260.2	237.9	228.8
72.5°	500.5	334.3	217.6	199.8	195.2
75°	412.9	255.7	179.5	163.8	161.7
77.5°	325.5	181.7	141.4	132.4	127.9
80°	244.5	130.2	107.6	98.8	98.8
82.5°	170.5	87.6	74.0	69.5	69.5
85°	96.4	49.3	42.6	42.6	42.6
87.5°	36.0	17.9	17.9	15.7	15.7
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	14.84	16.37	15.21	16.68	16.99	10.80	12.33	11.17	12.64	12.95
	3H	16.61	17.97	16.99	18.30	18.66	12.07	13.44	12.45	13.76	14.12
	4H	17.28	18.56	17.68	18.90	19.28	12.57	13.85	12.97	14.20	14.58
	6H	17.76	18.95	18.18	19.31	19.71	12.95	14.14	13.36	14.50	14.89
	8H	17.93	19.06	18.36	19.45	19.85	13.08	14.20	13.50	14.59	14.99
	12H	18.03	19.11	18.46	19.49	19.92	13.16	14.24	13.59	14.62	15.05
4H	2H	14.95	16.23	15.35	16.58	16.96	11.50	12.78	11.90	13.13	13.51
	3H	16.88	17.94	17.29	18.34	18.74	12.94	14.01	13.35	14.41	14.81
	4H	17.63	18.59	18.06	19.00	19.44	13.54	14.50	13.98	14.91	15.35
	6H	18.22	19.05	18.68	19.50	19.96	14.03	14.86	14.49	15.31	15.77
	8H	18.44	19.21	18.90	19.66	20.13	14.19	14.97	14.66	15.41	15.88
	12H	18.59	19.28	19.07	19.76	20.23	14.31	15.00	14.79	15.48	15.95
8H	4H	17.65	18.43	18.12	18.88	19.34	13.90	14.67	14.36	15.12	15.59
	6H	18.29	18.93	18.79	19.43	19.90	14.48	15.13	14.98	15.62	16.09
	8H	18.54	19.12	19.06	19.63	20.12	14.70	15.28	15.22	15.79	16.28
	12H	18.75	19.26	19.26	19.75	20.31	14.88	15.39	15.39	15.89	16.45
12H	4H	17.64	18.33	18.12	18.81	19.28	13.94	14.63	14.42	15.11	15.58
	6H	18.27	18.85	18.79	19.36	19.85	14.55	15.12	15.06	15.63	16.12
	8H	18.56	19.07	19.07	19.56	20.12	14.82	15.33	15.33	15.82	16.39