

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: P930492

Luminaire Tested: DFN2DS-PN2F0-060DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930492
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-PN2F0-060DS835-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

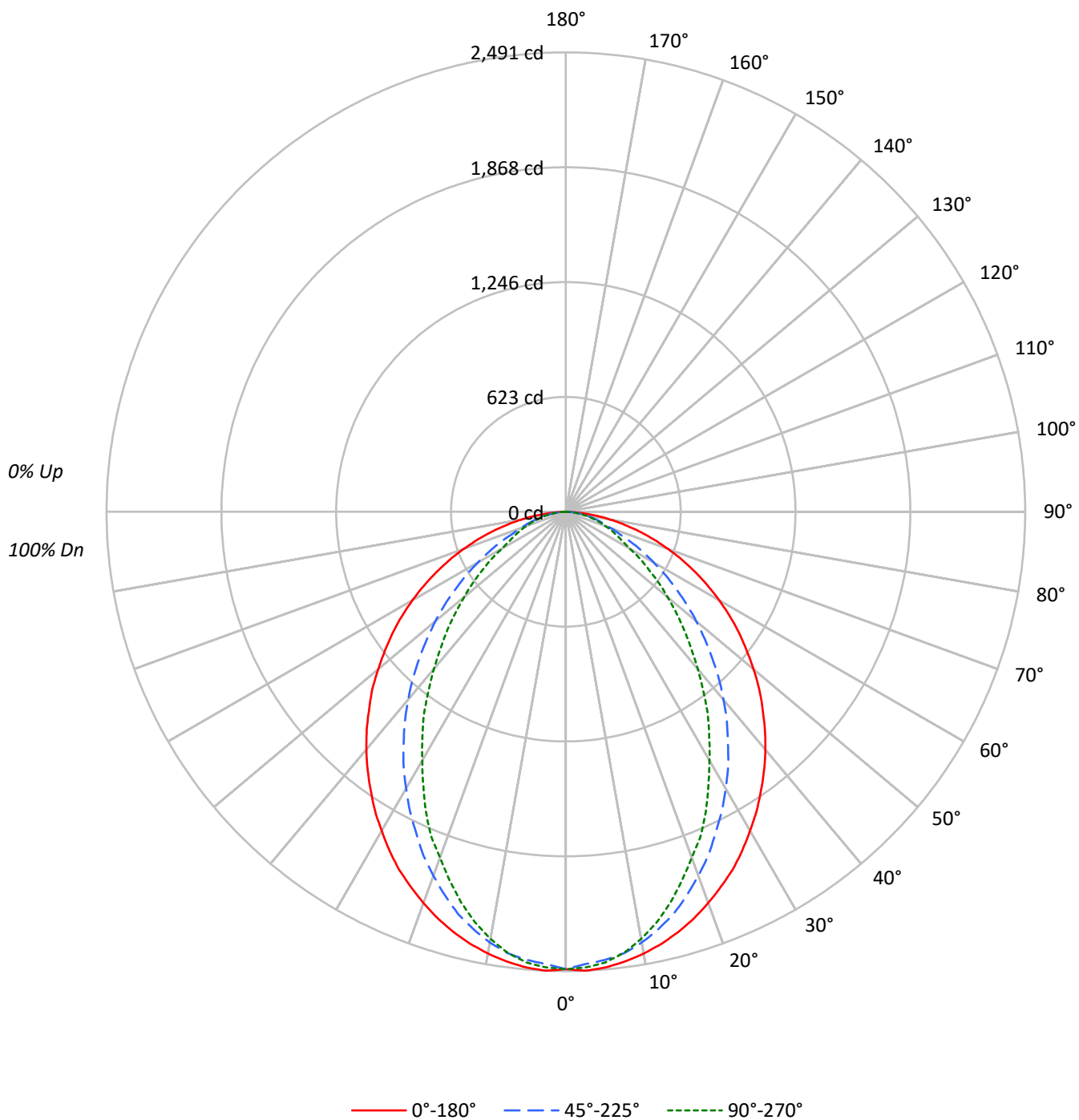
Lumens per Lamp: N/A
Luminaire Lumens: 5100.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 67.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930492

CATALOG NUMBER: DFN2DS-PN2F0-060DS835-RLL

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°	5371	5371	5371
5°	5391	5303	5333
10°	5350	5217	5172
15°	5289	5062	4916
20°	5203	4841	4598
25°	5117	4591	4290
30°	4995	4333	3895
35°	4878	4053	3548
40°	4759	3762	3147
45°	4619	3437	2784
50°	4477	3108	2428
55°	4330	2754	2085
60°	4161	2382	1731
65°	3968	2001	1575
70°	3737	1648	1449
75°	3455	1502	1353
80°	3050	1342	1232
85°	2396	1059	1059

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4619 cd/sqm

TEST NUMBER: P930492

CATALOG NUMBER: DFN2DS-PN2F0-060DS835-RLL

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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CATALOG NUMBER: DFN2DS-PN2F0-060DS835-RLL

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	17.07	18.60	17.44	18.91	19.22	13.04	14.56	13.40	14.87	15.19
	3H	18.84	20.21	19.22	20.53	20.89	14.30	15.67	14.68	15.99	16.36
	4H	19.51	20.79	19.91	21.14	21.51	14.80	16.08	15.20	16.43	16.81
	6H	20.00	21.18	20.41	21.54	21.94	15.18	16.37	15.60	16.73	17.13
	8H	20.16	21.29	20.59	21.68	22.08	15.31	16.43	15.73	16.82	17.23
	12H	20.26	21.34	20.69	21.72	22.15	15.39	16.47	15.82	16.85	17.28
4H	2H	17.18	18.46	17.58	18.81	19.19	13.73	15.01	14.13	15.36	15.74
	3H	19.11	20.17	19.52	20.57	20.98	15.17	16.24	15.59	16.64	17.04
	4H	19.86	20.82	20.29	21.23	21.67	15.77	16.73	16.21	17.15	17.58
	6H	20.45	21.29	20.91	21.73	22.19	16.26	17.09	16.72	17.54	18.00
	8H	20.67	21.45	21.13	21.89	22.36	16.42	17.20	16.89	17.65	18.11
	12H	20.82	21.52	21.30	21.99	22.47	16.54	17.24	17.02	17.71	18.18
8H	4H	19.89	20.66	20.35	21.11	21.57	16.13	16.91	16.59	17.35	17.82
	6H	20.52	21.17	21.02	21.66	22.13	16.71	17.36	17.21	17.85	18.33
	8H	20.77	21.35	21.29	21.86	22.35	16.94	17.51	17.45	18.02	18.51
	12H	20.98	21.49	21.49	21.98	22.54	17.11	17.62	17.62	18.12	18.68
12H	4H	19.87	20.56	20.35	21.04	21.51	16.17	16.87	16.65	17.34	17.81
	6H	20.50	21.08	21.02	21.59	22.08	16.78	17.36	17.29	17.86	18.35
	8H	20.79	21.30	21.30	21.79	22.36	17.05	17.56	17.56	18.05	18.62