

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: P929898

Luminaire Tested: DFN2DS-4P3F0-050DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929898
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-4P3F0-050DS835-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

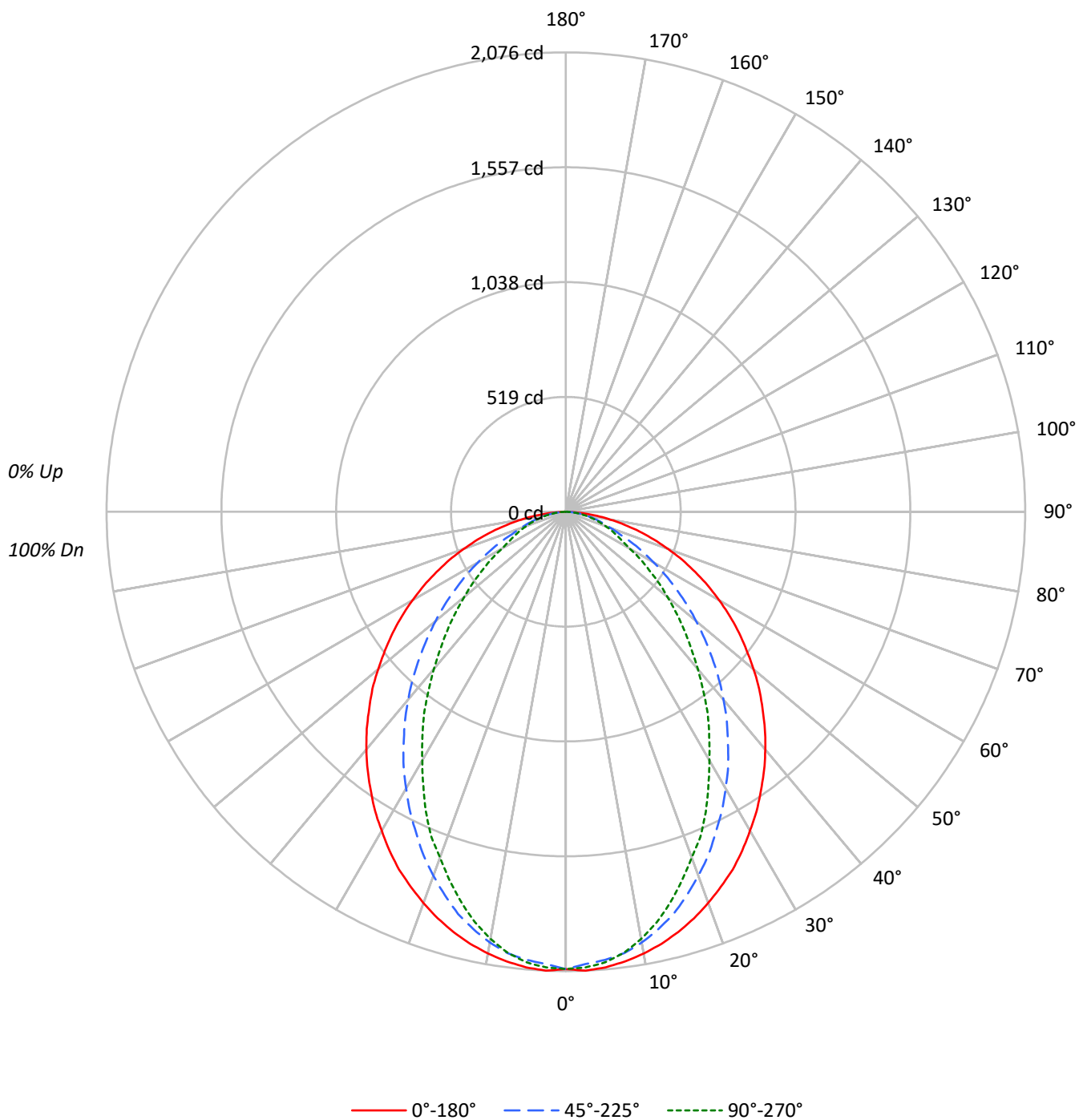
Lumens per Lamp: N/A
Luminaire Lumens: 4250.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
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°	2355	2355	2355
5°	2364	2325	2338
10°	2346	2288	2268
15°	2319	2220	2156
20°	2282	2123	2016
25°	2243	2013	1881
30°	2190	1900	1708
35°	2139	1777	1556
40°	2087	1650	1380
45°	2025	1507	1220
50°	1963	1363	1064
55°	1899	1207	914
60°	1824	1044	759
65°	1740	877	691
70°	1639	723	635
75°	1515	659	593
80°	1337	589	540
85°	1051	464	464

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2025 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	4.6
10°-20°	531.7	12.5
20°-30°	746.5	17.6
30°-40°	813.7	19.1
40°-50°	747.9	17.6
50°-60°	587.3	13.8
60°-70°	382.3	9.0
70°-80°	196.8	4.6
80°-90°	50.2	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°	1471.8	34.6
0°-40°	2285.5	53.8
0°-60°	3620.7	85.2
0°-90°	4250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2066	2066	2066	2066	2066	
5°	2066	2057	2033	2050	2044	196
15°	1966	1945	1881	1846	1827	554
25°	1784	1724	1601	1524	1496	821
35°	1537	1442	1277	1160	1118	962
45°	1257	1131	935	802	757	971
55°	956	810	608	496	460	854
65°	645	494	325	262	256	640
75°	344	213	150	136	135	364
85°	80	41	36	36	36	96
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2066.5	2066.5	2066.5	2066.5	2066.5
2.5°	2075.8	2066.5	2045.9	2064.7	2060.9
5°	2066.5	2057.2	2032.8	2049.6	2044.1
7.5°	2049.6	2038.5	2012.3	2019.7	2010.3
10°	2027.2	2014.1	1976.8	1971.1	1959.9
12.5°	1999.2	1982.4	1931.8	1920.7	1900.0
15°	1965.5	1944.9	1881.4	1845.9	1827.2
17.5°	1926.2	1896.3	1817.7	1776.6	1746.6
20°	1881.4	1843.9	1750.4	1703.8	1662.5
22.5°	1832.8	1789.7	1681.2	1617.7	1589.7
25°	1784.1	1724.2	1600.8	1524.2	1496.0
27.5°	1726.2	1662.5	1526.0	1438.1	1395.1
30°	1664.5	1593.3	1443.7	1348.4	1297.8
32.5°	1604.6	1518.5	1365.3	1253.0	1206.2
35°	1537.3	1441.9	1277.4	1159.5	1118.3
37.5°	1471.8	1368.9	1195.1	1065.9	1019.3
40°	1402.6	1290.5	1108.9	976.2	927.6
42.5°	1331.6	1211.9	1023.0	884.5	837.9
45°	1256.8	1131.4	935.1	802.2	757.3
47.5°	1185.7	1053.0	851.0	718.1	677.0
50°	1107.2	974.4	768.7	639.5	600.4
52.5°	1030.4	890.1	690.1	566.7	531.2
55°	955.6	809.7	607.7	495.6	460.1
57.5°	879.0	729.4	534.9	430.2	400.2
60°	800.4	650.8	458.1	362.9	332.9
62.5°	723.8	574.2	392.7	303.0	288.1
65°	645.2	493.7	325.4	261.9	256.2
67.5°	570.4	418.9	261.9	230.0	224.4
70°	491.9	346.0	216.9	198.2	190.7
72.5°	417.1	278.6	181.4	166.5	162.7
75°	344.1	213.1	149.6	136.5	134.7
77.5°	271.2	151.4	117.9	110.3	106.5
80°	203.8	108.5	89.7	82.3	82.3
82.5°	142.1	73.0	61.7	57.9	57.9
85°	80.4	41.1	35.5	35.5	35.5
87.5°	30.0	14.9	14.9	13.1	13.1
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	14.21	15.73	14.58	16.05	16.36	10.17	11.69	10.54	12.01	12.32
	3H	15.98	17.34	16.35	17.67	18.03	11.44	12.80	11.81	13.13	13.49
	4H	16.64	17.92	17.04	18.27	18.65	11.94	13.22	12.34	13.57	13.95
	6H	17.13	18.31	17.54	18.68	19.07	12.32	13.50	12.73	13.87	14.26
	8H	17.30	18.42	17.72	18.81	19.21	12.44	13.57	12.87	13.96	14.36
	12H	17.40	18.48	17.83	18.86	19.29	12.52	13.60	12.95	13.98	14.41
4H	2H	14.31	15.60	14.71	15.94	16.32	10.87	12.15	11.27	12.50	12.87
	3H	16.25	17.31	16.66	17.71	18.11	12.31	13.37	12.72	13.77	14.17
	4H	17.00	17.95	17.43	18.37	18.81	12.91	13.87	13.34	14.28	14.72
	6H	17.59	18.42	18.05	18.86	19.32	13.40	14.23	13.85	14.67	15.13
	8H	17.80	18.58	18.27	19.03	19.49	13.56	14.34	14.02	14.78	15.25
	12H	17.96	18.65	18.44	19.13	19.60	13.68	14.37	14.16	14.85	15.32
8H	4H	17.02	17.80	17.48	18.24	18.71	13.26	14.04	13.73	14.48	14.95
	6H	17.66	18.30	18.16	18.79	19.27	13.85	14.49	14.35	14.98	15.46
	8H	17.91	18.49	18.42	19.00	19.48	14.07	14.65	14.58	15.16	15.64
	12H	18.11	18.62	18.62	19.12	19.68	14.25	14.76	14.76	15.25	15.82
12H	4H	17.01	17.70	17.49	18.18	18.65	13.31	14.00	13.79	14.48	14.95
	6H	17.64	18.22	18.15	18.73	19.22	13.91	14.49	14.43	15.00	15.49
	8H	17.92	18.43	18.43	18.93	19.49	14.19	14.70	14.70	15.19	15.75