

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: P929917

Luminaire Tested: DFN2DS-4P3F0-060DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929917
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-4P3F0-060DS840-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

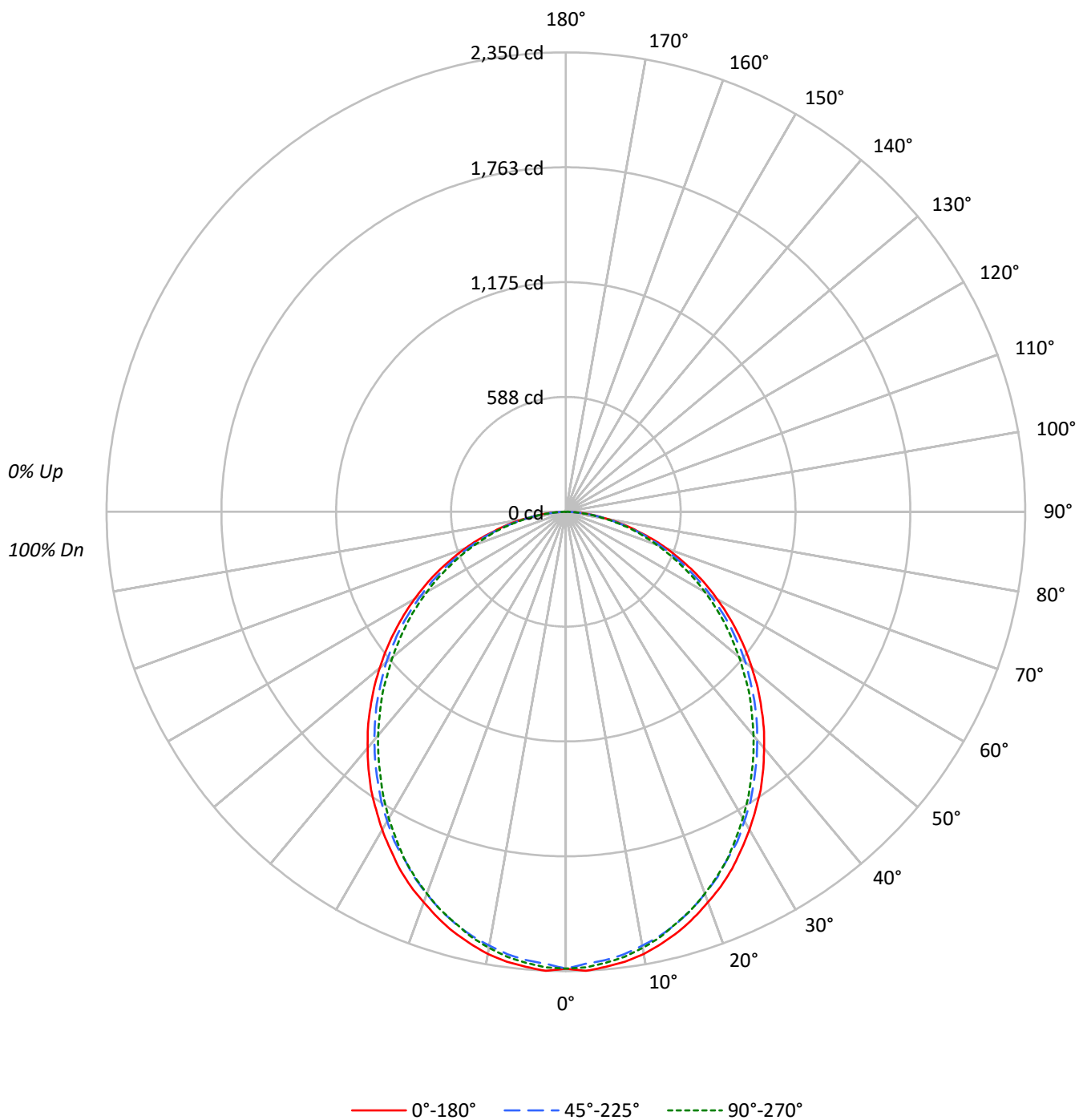
Lumens per Lamp: N/A
Luminaire Lumens: 5945.9 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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	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°	2663	2663	2663
5°	2673	2635	2650
10°	2658	2608	2621
15°	2625	2574	2572
20°	2578	2524	2521
25°	2532	2461	2461
30°	2472	2404	2383
35°	2417	2335	2301
40°	2347	2266	2223
45°	2278	2198	2144
50°	2203	2127	2052
55°	2126	2045	1969
60°	2038	1947	1875
65°	1945	1848	1764
70°	1827	1729	1648
75°	1662	1593	1554
80°	1475	1430	1357
85°	1203	1147	1029

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2278 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.0	3.7
10°-20°	618.9	10.4
20°-30°	909.5	15.3
30°-40°	1056.3	17.8
40°-50°	1055.0	17.7
50°-60°	919.9	15.5
60°-70°	680.0	11.4
70°-80°	384.8	6.5
80°-90°	101.5	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°	1748.3	29.4
0°-40°	2804.6	47.2
0°-60°	4779.6	80.4
0°-90°	5945.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5945.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2337	2328	2303	2321	2317	222
15°	2225	2211	2182	2191	2180	627
25°	2013	1996	1957	1962	1957	926
35°	1737	1715	1679	1665	1654	1085
45°	1414	1398	1364	1339	1330	1091
55°	1070	1056	1029	1002	991	956
65°	721	708	686	665	654	713
75°	377	373	362	348	353	403
85°	92	90	88	81	79	108
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2336.9	2336.9	2336.9	2336.9	2336.9
2.5°	2350.5	2339.3	2314.5	2336.9	2332.6
5°	2336.9	2328.1	2303.3	2321.2	2316.9
7.5°	2321.2	2307.9	2283.1	2301.2	2296.7
10°	2296.7	2281.0	2254.0	2271.9	2265.2
12.5°	2262.9	2249.4	2222.5	2233.7	2229.2
15°	2224.6	2211.3	2182.0	2191.1	2179.9
17.5°	2177.5	2164.2	2134.8	2145.9	2134.8
20°	2125.7	2112.4	2080.9	2087.6	2078.8
22.5°	2074.3	2054.0	2024.6	2024.6	2020.1
25°	2013.4	1995.6	1957.4	1961.7	1957.4
27.5°	1945.9	1930.2	1901.1	1894.5	1883.3
30°	1878.8	1860.6	1827.0	1820.3	1811.2
32.5°	1806.7	1793.4	1757.4	1743.7	1734.7
35°	1737.1	1714.7	1678.7	1665.1	1653.9
37.5°	1658.5	1638.1	1602.2	1586.4	1575.2
40°	1577.6	1559.5	1523.5	1503.5	1494.4
42.5°	1498.9	1480.8	1445.0	1422.4	1409.0
45°	1413.6	1397.8	1364.0	1339.4	1330.3
47.5°	1330.3	1314.6	1278.7	1253.9	1240.4
50°	1242.6	1231.4	1200.0	1168.5	1157.3
52.5°	1157.3	1141.5	1112.4	1087.7	1072.0
55°	1069.8	1056.2	1029.2	1002.3	991.1
57.5°	982.1	970.9	941.5	914.6	905.5
60°	894.3	885.5	854.1	829.2	822.5
62.5°	808.9	793.2	770.8	748.3	739.3
65°	721.4	707.9	685.5	665.2	654.0
67.5°	631.5	620.1	600.1	584.4	575.3
70°	548.3	539.3	519.0	503.3	494.5
72.5°	463.0	454.0	442.7	427.0	420.3
75°	377.4	373.2	361.7	348.3	352.9
77.5°	301.1	292.1	287.5	280.9	274.2
80°	224.8	222.4	217.9	211.2	206.7
82.5°	152.9	152.9	150.7	141.6	141.6
85°	92.0	89.9	87.7	80.8	78.7
87.5°	40.5	36.0	31.4	24.8	22.4
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	14.69	16.30	15.05	16.61	16.93	14.24	15.85	14.61	16.17	16.48
	3H	16.44	17.89	16.81	18.22	18.58	15.94	17.40	16.32	17.73	18.09
	4H	17.08	18.45	17.48	18.80	19.18	16.59	17.96	16.99	18.30	18.68
	6H	17.55	18.82	17.96	19.18	19.58	17.05	18.32	17.46	18.68	19.07
	8H	17.69	18.91	18.12	19.29	19.69	17.19	18.40	17.62	18.79	19.19
	12H	17.78	18.94	18.21	19.33	19.76	17.27	18.43	17.70	18.81	19.24
4H	2H	15.25	16.62	15.65	16.96	17.34	14.89	16.26	15.29	16.61	16.99
	3H	17.22	18.37	17.63	18.77	19.17	16.81	17.96	17.22	18.36	18.76
	4H	18.00	19.03	18.43	19.45	19.88	17.57	18.61	18.01	19.02	19.46
	6H	18.59	19.50	19.05	19.94	20.40	18.16	19.07	18.62	19.51	19.96
	8H	18.78	19.63	19.24	20.07	20.54	18.35	19.19	18.81	19.63	20.10
	12H	18.92	19.68	19.40	20.15	20.62	18.46	19.22	18.94	19.70	20.17
8H	4H	18.27	19.12	18.73	19.56	20.03	17.90	18.74	18.36	19.19	19.65
	6H	18.99	19.69	19.48	20.18	20.65	18.60	19.31	19.10	19.80	20.27
	8H	19.24	19.88	19.75	20.38	20.87	18.85	19.48	19.36	19.99	20.48
	12H	19.44	20.00	19.95	20.49	21.05	19.03	19.59	19.54	20.08	20.64
12H	4H	18.30	19.06	18.78	19.53	20.00	17.93	18.69	18.41	19.17	19.64
	6H	19.03	19.66	19.54	20.17	20.66	18.66	19.29	19.17	19.80	20.29
	8H	19.35	19.90	19.85	20.39	20.95	18.97	19.52	19.47	20.02	20.58