

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: P931432

Luminaire Tested: DFN2DS-TR3F0-090DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931432
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-TR3F0-090DS850-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

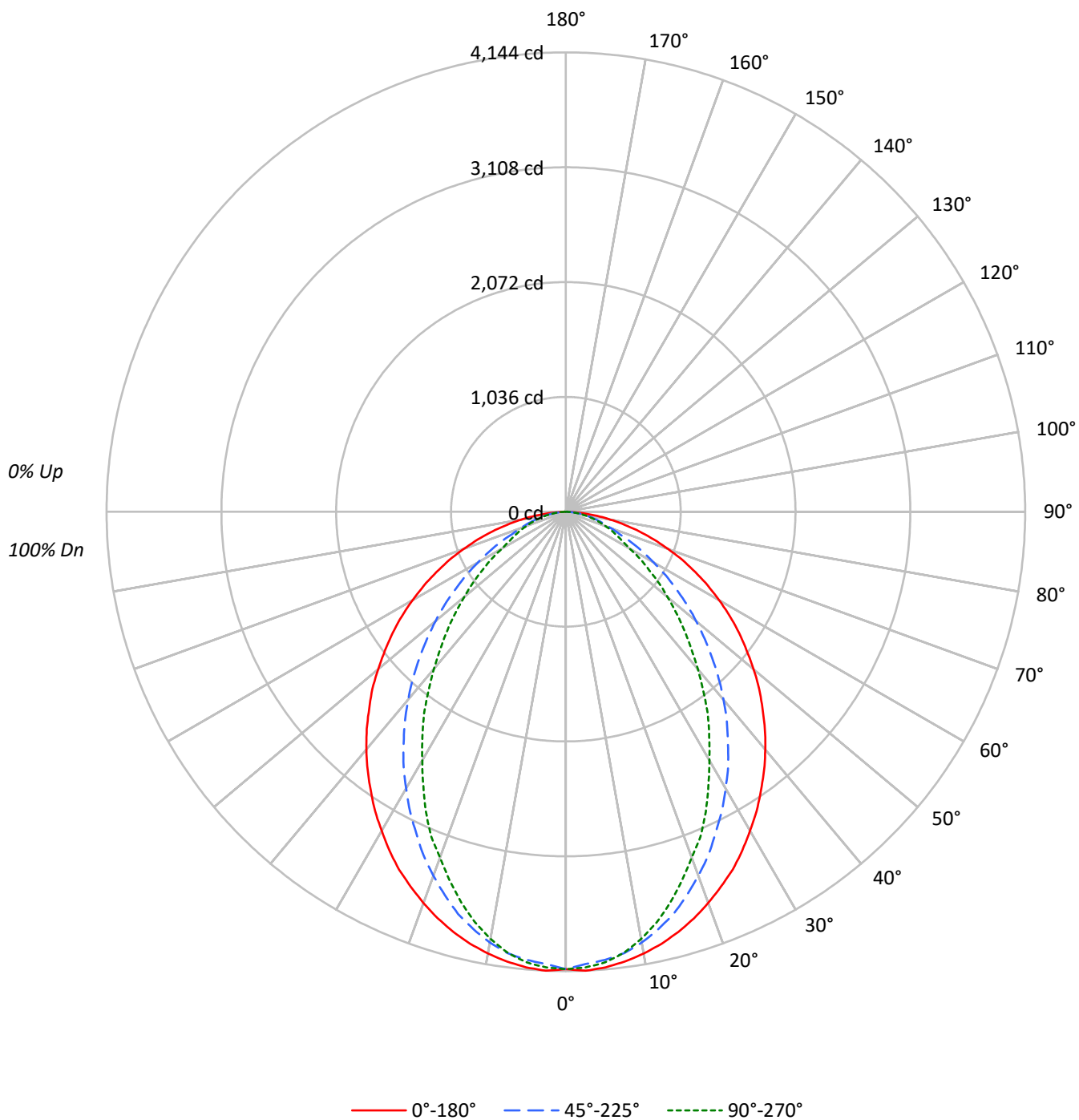
Lumens per Lamp: N/A
Luminaire Lumens: 8483.9 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 99.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	5140	5140	5140
5°	5160	5076	5104
10°	5120	4993	4950
15°	5062	4845	4706
20°	4980	4633	4401
25°	4897	4394	4106
30°	4781	4147	3728
35°	4668	3879	3396
40°	4555	3601	3012
45°	4421	3290	2664
50°	4284	2975	2323
55°	4144	2635	1995
60°	3982	2279	1656
65°	3798	1915	1508
70°	3577	1578	1387
75°	3307	1438	1295
80°	2919	1285	1180
85°	2293	1014	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 4421 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.6	4.6
10°-20°	1061.3	12.5
20°-30°	1490.1	17.6
30°-40°	1624.3	19.1
40°-50°	1492.9	17.6
50°-60°	1172.4	13.8
60°-70°	763.1	9.0
70°-80°	392.8	4.6
80°-90°	100.3	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°	2938.0	34.6
0°-40°	4562.3	53.8
0°-60°	7227.6	85.2
0°-90°	8483.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8483.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4125	4125	4125	4125	4125	
5°	4125	4106	4058	4091	4080	391
15°	3924	3882	3756	3685	3648	1106
25°	3562	3442	3196	3043	2986	1638
35°	3069	2878	2550	2315	2232	1921
45°	2509	2258	1867	1601	1512	1937
55°	1908	1616	1213	989	918	1705
65°	1288	986	650	523	511	1277
75°	687	425	299	272	269	726
85°	160	82	71	71	71	192
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4125.1	4125.1	4125.1	4125.1	4125.1
2.5°	4143.8	4125.1	4083.9	4121.6	4114.1
5°	4125.1	4106.5	4057.8	4091.4	4080.3
7.5°	4091.4	4069.3	4017.0	4031.7	4013.0
10°	4046.7	4020.6	3946.2	3934.6	3912.4
12.5°	3990.8	3957.2	3856.2	3834.0	3792.8
15°	3923.5	3882.4	3755.6	3684.7	3647.5
17.5°	3845.1	3785.3	3628.4	3546.5	3486.7
20°	3755.6	3680.8	3494.1	3401.1	3318.7
22.5°	3658.6	3572.6	3355.9	3229.2	3173.4
25°	3561.6	3441.9	3195.6	3042.7	2986.4
27.5°	3445.9	3318.7	3046.2	2870.8	2784.8
30°	3322.7	3180.5	2881.8	2691.8	2590.7
32.5°	3203.0	3031.1	2725.4	2501.2	2407.7
35°	3068.8	2878.3	2549.9	2314.7	2232.3
37.5°	2938.1	2732.6	2385.6	2127.7	2034.7
40°	2799.9	2576.1	2213.7	1948.7	1851.7
42.5°	2658.1	2419.3	2042.1	1765.7	1672.6
45°	2508.8	2258.5	1866.7	1601.3	1511.8
47.5°	2366.9	2102.0	1698.8	1433.4	1351.4
50°	2210.1	1945.1	1534.4	1276.6	1198.5
52.5°	2056.9	1776.8	1377.6	1131.2	1060.3
55°	1907.5	1616.4	1213.1	989.4	918.5
57.5°	1754.7	1456.0	1067.9	858.7	798.9
60°	1597.7	1299.1	914.6	724.4	664.6
62.5°	1444.9	1146.3	783.8	604.8	575.1
65°	1288.0	985.5	649.5	522.8	511.4
67.5°	1138.7	836.1	522.8	459.0	447.9
70°	981.9	690.8	433.0	395.7	380.6
72.5°	832.5	556.1	362.0	332.3	324.8
75°	686.8	425.4	298.7	272.5	268.9
77.5°	541.4	302.2	235.2	220.2	212.7
80°	406.8	216.7	179.0	164.4	164.4
82.5°	283.6	145.7	123.2	115.7	115.7
85°	160.4	82.0	70.9	70.9	70.9
87.5°	59.8	29.7	29.7	26.2	26.2
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	16.92	18.44	17.29	18.76	19.07	12.88	14.40	13.25	14.72	15.03
	3H	18.69	20.05	19.07	20.38	20.74	14.15	15.51	14.53	15.84	16.20
	4H	19.35	20.63	19.75	20.98	21.36	14.65	15.93	15.05	16.28	16.66
	6H	19.84	21.03	20.26	21.39	21.78	15.03	16.21	15.44	16.58	16.97
	8H	20.01	21.14	20.43	21.52	21.93	15.16	16.28	15.58	16.67	17.07
	12H	20.11	21.19	20.54	21.57	22.00	15.24	16.31	15.67	16.70	17.13
4H	2H	17.03	18.31	17.43	18.66	19.03	13.58	14.86	13.98	15.21	15.59
	3H	18.96	20.02	19.37	20.42	20.82	15.02	16.08	15.43	16.48	16.89
	4H	19.71	20.67	20.14	21.08	21.52	15.62	16.58	16.05	16.99	17.43
	6H	20.30	21.13	20.76	21.58	22.04	16.11	16.94	16.57	17.38	17.84
	8H	20.52	21.29	20.98	21.74	22.20	16.27	17.05	16.73	17.49	17.96
	12H	20.67	21.36	21.15	21.84	22.31	16.39	17.08	16.87	17.56	18.03
8H	4H	19.73	20.51	20.20	20.95	21.42	15.97	16.75	16.44	17.20	17.66
	6H	20.37	21.01	20.87	21.50	21.98	16.56	17.20	17.06	17.70	18.17
	8H	20.62	21.20	21.14	21.71	22.20	16.78	17.36	17.30	17.87	18.36
	12H	20.83	21.34	21.34	21.83	22.39	16.96	17.47	17.47	17.96	18.53
12H	4H	19.72	20.41	20.20	20.89	21.36	16.02	16.71	16.50	17.19	17.66
	6H	20.35	20.93	20.87	21.44	21.93	16.62	17.20	17.14	17.71	18.20
	8H	20.64	21.15	21.15	21.64	22.20	16.90	17.41	17.41	17.90	18.46