

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: P930974

Luminaire Tested: DFN2DS-SQ3F0-070DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930974
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-SQ3F0-070DS950-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

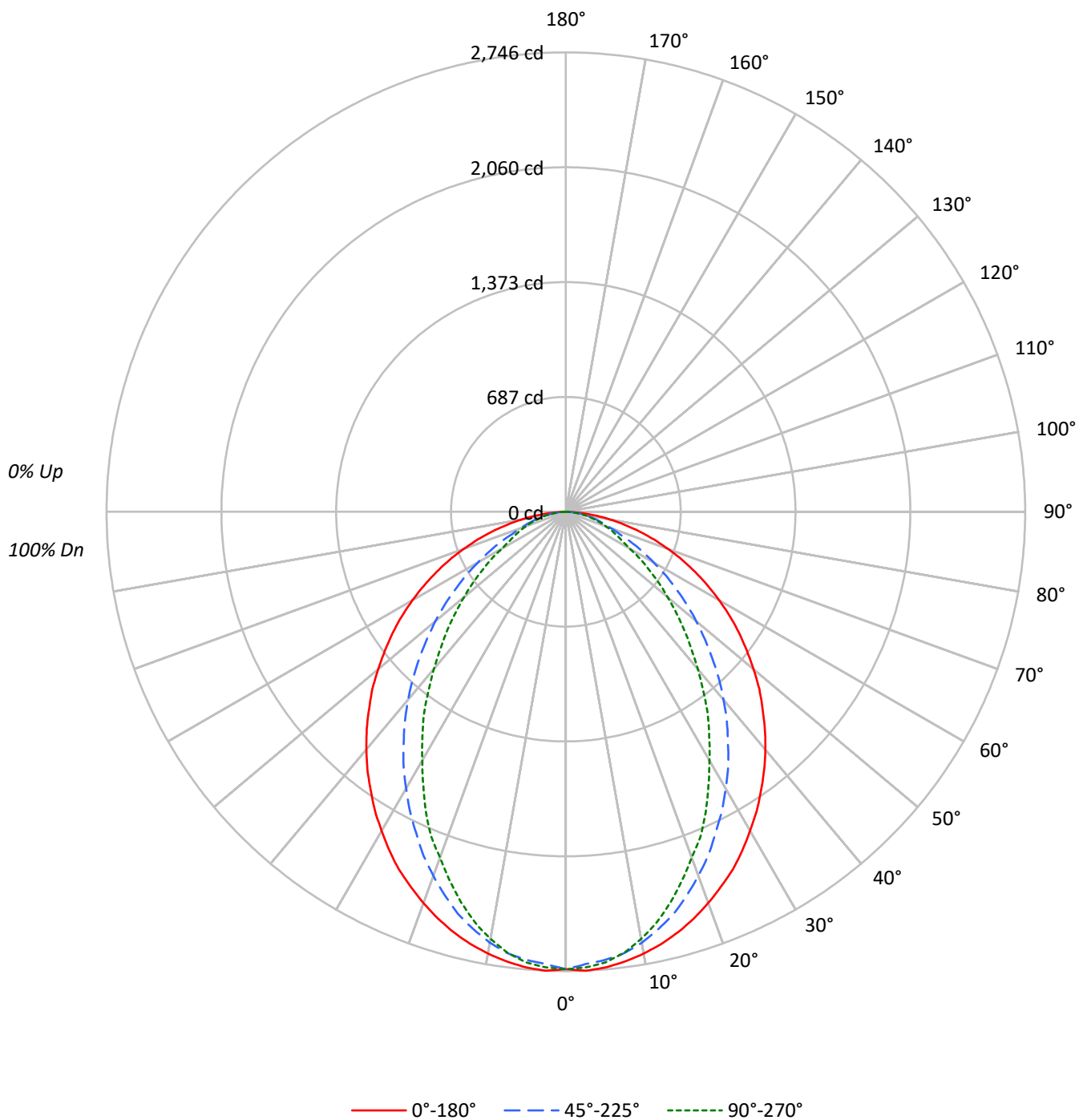
Lumens per Lamp: N/A
Luminaire Lumens: 5622.7 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
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°	3133	3133	3133
5°	3145	3093	3110
10°	3120	3043	3017
15°	3085	2953	2868
20°	3035	2824	2682
25°	2984	2677	2502
30°	2914	2527	2272
35°	2845	2364	2069
40°	2775	2194	1836
45°	2694	2005	1624
50°	2611	1813	1416
55°	2525	1606	1216
60°	2427	1389	1009
65°	2314	1167	919
70°	2180	961	845
75°	2015	876	789
80°	1779	783	719
85°	1397	618	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2694 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.2	4.6
10°-20°	703.4	12.5
20°-30°	987.6	17.6
30°-40°	1076.5	19.1
40°-50°	989.4	17.6
50°-60°	777.0	13.8
60°-70°	505.8	9.0
70°-80°	260.3	4.6
80°-90°	66.5	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°	1947.2	34.6
0°-40°	3023.7	53.8
0°-60°	4790.2	85.2
0°-90°	5622.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5622.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2734	2734	2734	2734	2734	
5°	2734	2722	2689	2712	2704	259
15°	2600	2573	2489	2442	2417	733
25°	2360	2281	2118	2016	1979	1086
35°	2034	1908	1690	1534	1480	1273
45°	1663	1497	1237	1061	1002	1284
55°	1264	1071	804	656	609	1130
65°	854	653	430	346	339	846
75°	455	282	198	181	178	481
85°	106	54	47	47	47	127
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2734.0	2734.0	2734.0	2734.0	2734.0
2.5°	2746.3	2734.0	2706.7	2731.6	2726.6
5°	2734.0	2721.6	2689.4	2711.7	2704.3
7.5°	2711.7	2696.9	2662.3	2672.0	2659.7
10°	2682.0	2664.7	2615.3	2607.7	2593.0
12.5°	2645.0	2622.7	2555.8	2541.0	2513.7
15°	2600.4	2573.0	2489.0	2442.1	2417.4
17.5°	2548.4	2508.8	2404.8	2350.4	2310.8
20°	2489.0	2439.4	2315.8	2254.1	2199.5
22.5°	2424.8	2367.8	2224.2	2140.1	2103.2
25°	2360.4	2281.1	2117.8	2016.5	1979.3
27.5°	2283.8	2199.5	2018.9	1902.7	1845.7
30°	2202.1	2107.9	1909.9	1784.0	1717.1
32.5°	2122.8	2009.0	1806.3	1657.7	1595.7
35°	2033.8	1907.6	1690.0	1534.1	1479.5
37.5°	1947.3	1811.0	1581.1	1410.1	1348.5
40°	1855.6	1707.3	1467.1	1291.5	1227.2
42.5°	1761.7	1603.4	1353.4	1170.2	1108.6
45°	1662.7	1496.8	1237.2	1061.3	1002.0
47.5°	1568.7	1393.1	1125.9	950.0	895.7
50°	1464.8	1289.2	1016.9	846.1	794.4
52.5°	1363.2	1177.6	913.0	749.7	702.7
55°	1264.2	1071.3	804.0	655.7	608.8
57.5°	1162.9	964.9	707.7	569.1	529.5
60°	1059.0	861.0	606.1	480.2	440.5
62.5°	957.6	759.7	519.5	400.9	381.1
65°	853.6	653.1	430.5	346.5	338.9
67.5°	754.7	554.1	346.5	304.2	296.9
70°	650.7	457.8	286.9	262.2	252.2
72.5°	551.8	368.5	239.9	220.3	215.3
75°	455.2	281.9	197.9	180.6	178.2
77.5°	358.8	200.2	155.9	145.9	141.0
80°	269.6	143.5	118.7	109.0	109.0
82.5°	188.0	96.6	81.6	76.6	76.6
85°	106.3	54.3	47.0	47.0	47.0
87.5°	39.6	19.7	19.7	17.3	17.3
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	15.20	16.72	15.57	17.04	17.35	11.16	12.68	11.53	13.00	13.31
	3H	16.97	18.33	17.34	18.66	19.02	12.43	13.79	12.81	14.12	14.48
	4H	17.63	18.91	18.03	19.26	19.64	12.93	14.21	13.33	14.56	14.94
	6H	18.12	19.31	18.53	19.67	20.06	13.31	14.49	13.72	14.86	15.25
	8H	18.29	19.41	18.71	19.80	20.20	13.43	14.56	13.86	14.95	15.35
	12H	18.39	19.47	18.82	19.85	20.28	13.52	14.59	13.95	14.98	15.41
4H	2H	15.31	16.59	15.71	16.93	17.31	11.86	13.14	12.26	13.49	13.87
	3H	17.24	18.30	17.65	18.70	19.10	13.30	14.36	13.71	14.76	15.16
	4H	17.99	18.94	18.42	19.36	19.80	13.90	14.86	14.33	15.27	15.71
	6H	18.58	19.41	19.04	19.85	20.31	14.39	15.22	14.85	15.66	16.12
	8H	18.79	19.57	19.26	20.02	20.48	14.55	15.33	15.01	15.77	16.24
	12H	18.95	19.64	19.43	20.12	20.59	14.67	15.36	15.15	15.84	16.31
8H	4H	18.01	18.79	18.48	19.23	19.70	14.25	15.03	14.72	15.48	15.94
	6H	18.65	19.29	19.15	19.78	20.26	14.84	15.48	15.34	15.97	16.45
	8H	18.90	19.48	19.41	19.99	20.47	15.06	15.64	15.58	16.15	16.64
	12H	19.10	19.61	19.61	20.11	20.67	15.24	15.75	15.75	16.24	16.81
12H	4H	18.00	18.69	18.48	19.17	19.64	14.30	14.99	14.78	15.47	15.94
	6H	18.63	19.21	19.14	19.72	20.21	14.90	15.48	15.42	15.99	16.48
	8H	18.92	19.43	19.42	19.92	20.48	15.18	15.69	15.69	16.18	16.74