

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: P931280

Luminaire Tested: DFN2DS-TR2F0-040DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931280
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-TR2F0-040DS950-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

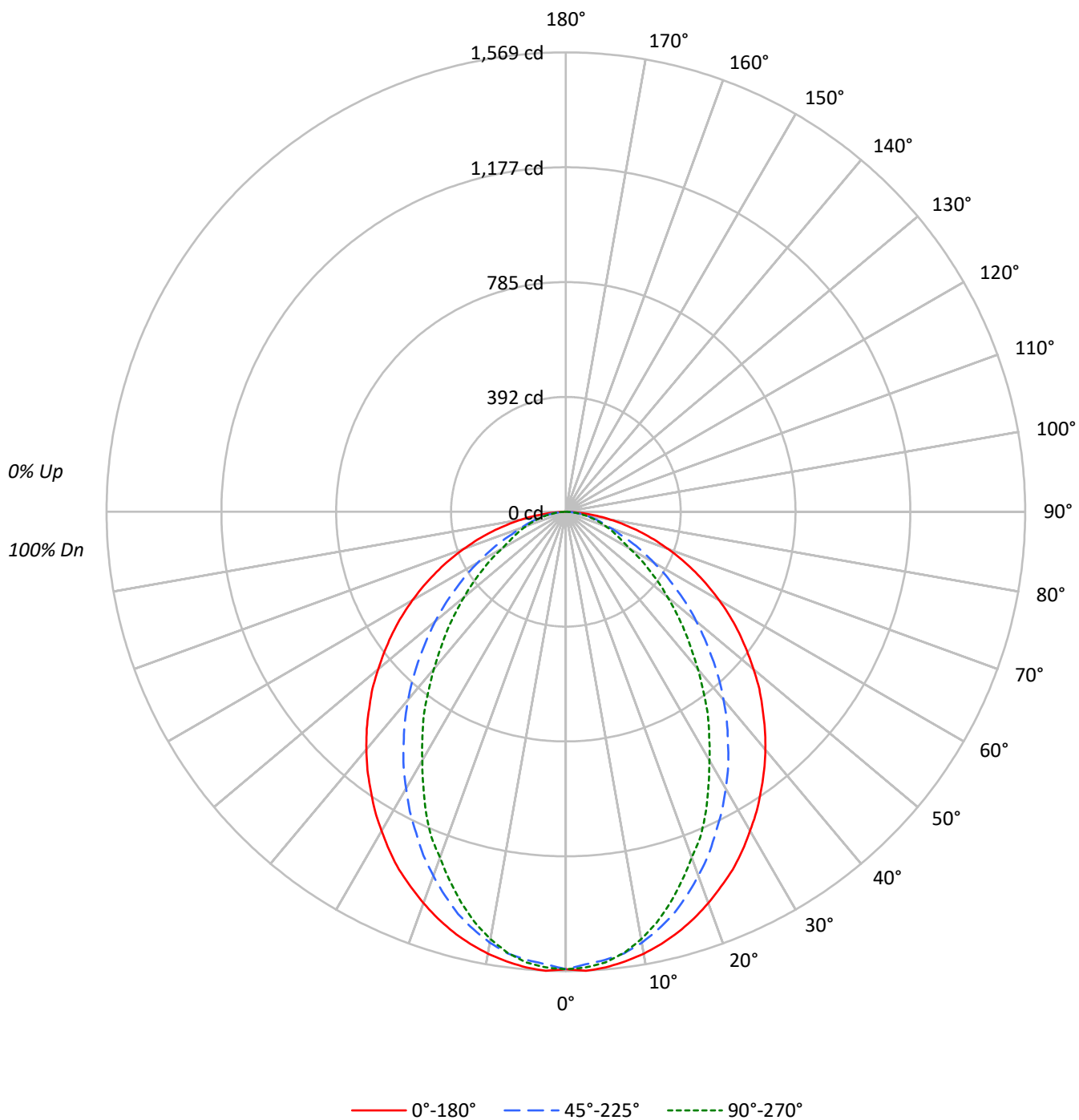
Lumens per Lamp: N/A
Luminaire Lumens: 3213.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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°	3485	3485	3485
5°	3498	3441	3460
10°	3471	3385	3356
15°	3431	3284	3190
20°	3376	3141	2983
25°	3319	2978	2783
30°	3241	2811	2527
35°	3165	2629	2302
40°	3087	2441	2042
45°	2997	2230	1806
50°	2904	2016	1575
55°	2810	1787	1353
60°	2699	1545	1123
65°	2574	1298	1022
70°	2425	1070	940
75°	2241	975	878
80°	1978	871	800
85°	1556	686	686

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2997 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	4.6
10°-20°	401.9	12.5
20°-30°	564.3	17.6
30°-40°	615.1	19.1
40°-50°	565.4	17.6
50°-60°	444.0	13.8
60°-70°	289.0	9.0
70°-80°	148.8	4.6
80°-90°	38.0	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°	1112.7	34.6
0°-40°	1727.8	53.8
0°-60°	2737.2	85.2
0°-90°	3213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3213.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1562	1562	1562	1562	1562	
5°	1562	1555	1537	1550	1545	148
15°	1486	1470	1422	1396	1381	419
25°	1349	1304	1210	1152	1131	620
35°	1162	1090	966	877	845	727
45°	950	855	707	606	573	734
55°	722	612	460	375	348	646
65°	488	373	246	198	194	484
75°	260	161	113	103	102	275
85°	61	31	27	27	27	73
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1562.3	1562.3	1562.3	1562.3	1562.3
2.5°	1569.4	1562.3	1546.7	1561.0	1558.0
5°	1562.3	1555.2	1536.8	1549.5	1545.4
7.5°	1549.5	1541.1	1521.4	1526.8	1519.8
10°	1532.6	1522.7	1494.4	1490.1	1481.8
12.5°	1511.4	1498.7	1460.4	1452.0	1436.4
15°	1485.9	1470.3	1422.3	1395.5	1381.4
17.5°	1456.2	1433.6	1374.1	1343.1	1320.4
20°	1422.3	1394.0	1323.3	1288.0	1256.8
22.5°	1385.6	1353.1	1270.9	1222.9	1201.9
25°	1348.8	1303.5	1210.2	1152.3	1131.0
27.5°	1305.0	1256.8	1153.7	1087.2	1054.6
30°	1258.4	1204.5	1091.4	1019.4	981.2
32.5°	1213.1	1148.0	1032.1	947.3	911.8
35°	1162.3	1090.1	965.7	876.6	845.4
37.5°	1112.7	1034.9	903.4	805.8	770.6
40°	1060.4	975.6	838.4	738.0	701.3
42.5°	1006.6	916.2	773.4	668.7	633.4
45°	950.1	855.3	707.0	606.5	572.6
47.5°	896.4	796.1	643.4	542.9	511.8
50°	837.0	736.6	581.1	483.5	453.9
52.5°	779.0	672.9	521.7	428.4	401.5
55°	722.5	612.2	459.5	374.7	347.9
57.5°	664.5	551.4	404.4	325.2	302.6
60°	605.1	492.0	346.3	274.3	251.7
62.5°	547.2	434.1	296.8	229.1	217.8
65°	487.8	373.2	246.0	198.0	193.6
67.5°	431.3	316.7	198.0	173.9	169.6
70°	371.9	261.6	164.0	149.9	144.1
72.5°	315.3	210.6	137.1	125.9	123.0
75°	260.1	161.1	113.1	103.2	101.9
77.5°	205.1	114.4	89.1	83.4	80.5
80°	154.0	82.0	67.8	62.3	62.3
82.5°	107.4	55.2	46.7	43.8	43.8
85°	60.8	31.1	26.8	26.8	26.8
87.5°	22.7	11.2	11.2	9.9	9.9
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	15.57	17.09	15.94	17.41	17.72	11.53	13.05	11.90	13.37	13.68
	3H	17.34	18.70	17.72	19.03	19.39	12.80	14.16	13.18	14.49	14.85
	4H	18.00	19.28	18.40	19.63	20.01	13.30	14.58	13.70	14.93	15.31
	6H	18.49	19.68	18.90	20.04	20.43	13.68	14.86	14.09	15.23	15.62
	8H	18.66	19.78	19.08	20.17	20.57	13.81	14.93	14.23	15.32	15.72
	12H	18.76	19.84	19.19	20.22	20.65	13.89	14.96	14.32	15.35	15.78
4H	2H	15.68	16.96	16.08	17.31	17.68	12.23	13.51	12.63	13.86	14.24
	3H	17.61	18.67	18.02	19.07	19.47	13.67	14.73	14.08	15.13	15.53
	4H	18.36	19.32	18.79	19.73	20.17	14.27	15.23	14.70	15.64	16.08
	6H	18.95	19.78	19.41	20.22	20.68	14.76	15.59	15.22	16.03	16.49
	8H	19.16	19.94	19.63	20.39	20.85	14.92	15.70	15.38	16.14	16.61
	12H	19.32	20.01	19.80	20.49	20.96	15.04	15.73	15.52	16.21	16.68
8H	4H	18.38	19.16	18.85	19.60	20.07	14.62	15.40	15.09	15.85	16.31
	6H	19.02	19.66	19.52	20.15	20.63	15.21	15.85	15.71	16.35	16.82
	8H	19.27	19.85	19.78	20.36	20.84	15.43	16.01	15.95	16.52	17.01
	12H	19.47	19.98	19.98	20.48	21.04	15.61	16.12	16.12	16.61	17.18
12H	4H	18.37	19.06	18.85	19.54	20.01	14.67	15.36	15.15	15.84	16.31
	6H	19.00	19.58	19.51	20.09	20.58	15.27	15.85	15.79	16.36	16.85
	8H	19.29	19.80	19.79	20.29	20.85	15.55	16.06	16.06	16.55	17.11