

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: P931230

Luminaire Tested: DFN2DS-TR2F0-020DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931230
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-TR2F0-020DS835-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

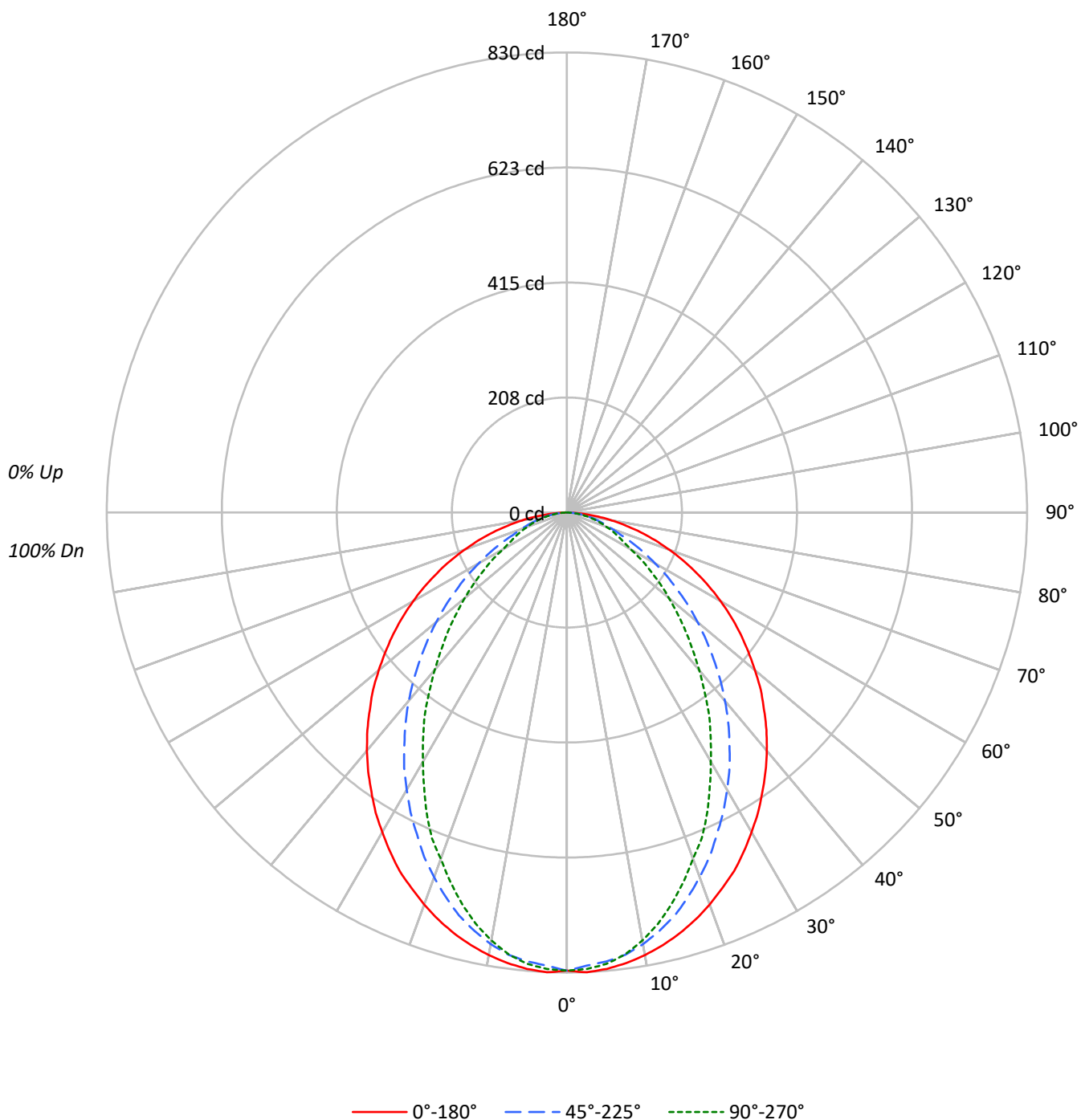
Lumens per Lamp: N/A
Luminaire Lumens: 1700.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1844	1844	1844
5°	1851	1820	1831
10°	1837	1791	1776
15°	1815	1738	1688
20°	1786	1662	1578
25°	1756	1576	1473
30°	1715	1487	1337
35°	1674	1391	1218
40°	1633	1292	1080
45°	1586	1180	955
50°	1537	1067	833
55°	1486	945	716
60°	1428	818	594
65°	1362	687	541
70°	1283	565	498
75°	1186	515	464
80°	1047	461	423
85°	821	363	363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1586 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	4.6
10°-20°	212.7	12.5
20°-30°	298.6	17.6
30°-40°	325.5	19.1
40°-50°	299.1	17.6
50°-60°	234.9	13.8
60°-70°	152.9	9.0
70°-80°	78.7	4.6
80°-90°	20.1	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°	588.7	34.6
0°-40°	914.2	53.8
0°-60°	1448.3	85.2
0°-90°	1700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1700.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	827	823	813	820	818	78
15°	786	778	752	738	731	222
25°	714	690	640	610	598	328
35°	615	577	511	464	447	385
45°	503	452	374	321	303	388
55°	382	324	243	198	184	342
65°	258	198	130	105	102	256
75°	138	85	60	55	54	146
85°	32	16	14	14	14	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.6	826.6	826.6	826.6	826.6
2.5°	830.3	826.6	818.3	825.9	824.4
5°	826.6	822.9	813.1	819.9	817.6
7.5°	819.9	815.4	804.9	807.9	804.1
10°	810.9	805.6	790.7	788.4	784.0
12.5°	799.7	792.9	772.7	768.3	760.0
15°	786.2	777.9	752.5	738.3	730.9
17.5°	770.5	758.5	727.1	710.6	698.7
20°	752.5	737.5	700.2	681.5	665.0
22.5°	733.1	715.9	672.5	647.1	635.9
25°	713.7	689.7	640.3	609.7	598.4
27.5°	690.5	665.0	610.4	575.2	558.0
30°	665.8	637.3	577.5	539.4	519.1
32.5°	641.8	607.4	546.1	501.2	482.5
35°	614.9	576.8	511.0	463.8	447.3
37.5°	588.7	547.5	478.0	426.4	407.7
40°	561.0	516.2	443.6	390.5	371.0
42.5°	532.6	484.8	409.2	353.8	335.2
45°	502.7	452.5	374.1	320.9	302.9
47.5°	474.3	421.2	340.4	287.2	270.8
50°	442.9	389.8	307.5	255.8	240.2
52.5°	412.1	356.0	276.0	226.7	212.5
55°	382.2	323.9	243.1	198.3	184.0
57.5°	351.6	291.7	214.0	172.1	160.1
60°	320.2	260.3	183.3	145.2	133.2
62.5°	289.5	229.7	157.1	121.2	115.2
65°	258.1	197.5	130.2	104.8	102.5
67.5°	228.2	167.5	104.8	92.0	89.8
70°	196.7	138.4	86.7	79.3	76.3
72.5°	166.8	111.4	72.5	66.6	65.1
75°	137.6	85.2	59.8	54.6	53.9
77.5°	108.5	60.6	47.1	44.1	42.6
80°	81.5	43.4	35.9	32.9	32.9
82.5°	56.8	29.2	24.7	23.2	23.2
85°	32.1	16.4	14.2	14.2	14.2
87.5°	12.0	6.0	6.0	5.2	5.2
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	13.36	14.88	13.72	15.19	15.51	9.32	10.84	9.69	11.16	11.47
	3H	15.12	16.49	15.50	16.82	17.18	10.59	11.95	10.97	12.28	12.64
	4H	15.79	17.07	16.19	17.42	17.80	11.09	12.37	11.49	12.72	13.10
	6H	16.28	17.46	16.69	17.83	18.22	11.47	12.65	11.88	13.02	13.41
	8H	16.45	17.57	16.87	17.96	18.36	11.59	12.72	12.02	13.11	13.51
	12H	16.55	17.63	16.98	18.01	18.44	11.68	12.75	12.11	13.14	13.56
4H	2H	13.46	14.74	13.86	15.09	15.47	10.02	11.30	10.42	11.65	12.03
	3H	15.40	16.46	15.81	16.86	17.26	11.46	12.52	11.87	12.92	13.32
	4H	16.15	17.10	16.58	17.52	17.96	12.06	13.02	12.49	13.43	13.87
	6H	16.74	17.57	17.20	18.01	18.47	12.55	13.38	13.00	13.82	14.28
	8H	16.95	17.73	17.42	18.17	18.64	12.71	13.49	13.17	13.93	14.40
	12H	17.11	17.80	17.59	18.28	18.75	12.83	13.52	13.31	14.00	14.47
8H	4H	16.17	16.95	16.63	17.39	17.86	12.41	13.19	12.88	13.63	14.10
	6H	16.81	17.45	17.30	17.94	18.42	13.00	13.64	13.50	14.13	14.61
	8H	17.06	17.63	17.57	18.14	18.63	13.22	13.80	13.73	14.31	14.79
	12H	17.26	17.77	17.77	18.26	18.83	13.40	13.91	13.91	14.40	14.97
12H	4H	16.15	16.85	16.64	17.33	17.80	12.46	13.15	12.94	13.63	14.10
	6H	16.79	17.37	17.30	17.88	18.36	13.06	13.64	13.58	14.15	14.64
	8H	17.07	17.58	17.58	18.07	18.64	13.34	13.85	13.85	14.34	14.90