

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: P931233

Luminaire Tested: DFN2DS-TR2F0-020DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931233
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-TR2F0-020DS850-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

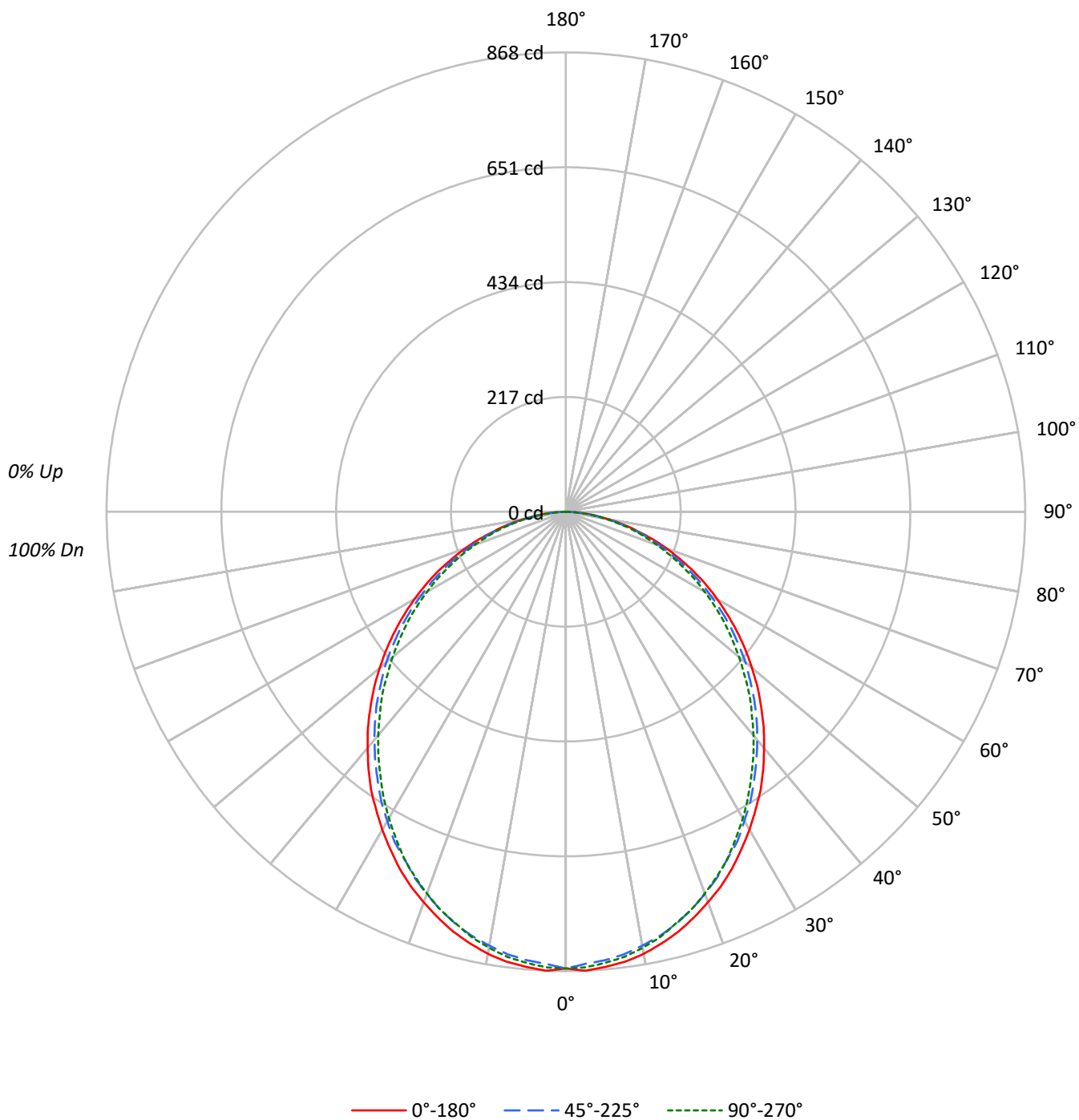
Lumens per Lamp: N/A
Luminaire Lumens: 2195.8 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
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
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°	1925	1925	1925
5°	1932	1904	1916
10°	1921	1885	1895
15°	1897	1861	1859
20°	1863	1824	1822
25°	1830	1779	1779
30°	1787	1738	1722
35°	1747	1688	1663
40°	1696	1638	1607
45°	1647	1589	1550
50°	1592	1538	1483
55°	1536	1478	1423
60°	1473	1407	1355
65°	1406	1336	1275
70°	1321	1249	1191
75°	1201	1150	1123
80°	1067	1034	980
85°	868	829	745

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1647 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.7
10°-20°	228.6	10.4
20°-30°	335.9	15.3
30°-40°	390.1	17.8
40°-50°	389.6	17.7
50°-60°	339.7	15.5
60°-70°	251.1	11.4
70°-80°	142.1	6.5
80°-90°	37.5	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°	645.7	29.4
0°-40°	1035.8	47.2
0°-60°	1765.1	80.4
0°-90°	2195.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2195.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	863	860	851	857	856	82
15°	822	817	806	809	805	231
25°	744	737	723	724	723	342
35°	642	633	620	615	611	401
45°	522	516	504	495	491	403
55°	395	390	380	370	366	353
65°	266	261	253	246	242	263
75°	139	138	134	129	130	149
85°	34	33	32	30	29	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	863.9	854.7	863.0	861.5
5°	863.0	859.8	850.6	857.3	855.6
7.5°	857.3	852.3	843.2	849.8	848.2
10°	848.2	842.4	832.4	839.0	836.5
12.5°	835.6	830.8	820.8	824.9	823.2
15°	821.5	816.7	805.8	809.1	805.0
17.5°	804.1	799.3	788.4	792.5	788.4
20°	785.1	780.1	768.4	771.0	767.6
22.5°	766.0	758.6	747.7	747.7	746.0
25°	743.6	736.9	722.8	724.4	722.8
27.5°	718.6	712.9	702.1	699.7	695.5
30°	693.8	687.1	674.7	672.3	668.8
32.5°	667.2	662.3	649.0	644.0	640.7
35°	641.6	633.2	619.9	614.9	610.7
37.5°	612.5	605.0	591.7	585.9	581.7
40°	582.6	575.9	562.6	555.3	551.8
42.5°	553.5	546.8	533.7	525.3	520.3
45°	522.0	516.2	503.7	494.6	491.3
47.5°	491.3	485.5	472.2	463.0	458.1
50°	458.9	454.8	443.2	431.5	427.4
52.5°	427.4	421.5	410.8	401.7	395.9
55°	395.0	390.0	380.1	370.2	366.0
57.5°	362.6	358.5	347.7	337.8	334.4
60°	330.3	327.0	315.4	306.2	303.8
62.5°	298.8	292.9	284.7	276.4	273.0
65°	266.4	261.4	253.2	245.6	241.5
67.5°	233.2	229.0	221.6	215.8	212.5
70°	202.5	199.2	191.6	185.9	182.7
72.5°	171.0	167.7	163.5	157.7	155.3
75°	139.4	137.8	133.5	128.6	130.3
77.5°	111.2	107.9	106.1	103.7	101.3
80°	83.1	82.2	80.5	78.0	76.3
82.5°	56.4	56.4	55.7	52.3	52.3
85°	33.9	33.2	32.4	29.8	29.1
87.5°	15.0	13.3	11.6	9.2	8.3
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	13.56	15.17	13.92	15.48	15.80	13.11	14.73	13.48	15.04	15.35
	3H	15.31	16.76	15.68	17.09	17.45	14.82	16.27	15.19	16.60	16.96
	4H	15.95	17.32	16.35	17.67	18.05	15.46	16.83	15.86	17.18	17.55
	6H	16.42	17.69	16.83	18.06	18.45	15.92	17.19	16.33	17.56	17.95
	8H	16.57	17.78	16.99	18.17	18.57	16.06	17.28	16.49	17.66	18.06
	12H	16.66	17.82	17.09	18.20	18.63	16.15	17.31	16.57	17.69	18.12
4H	2H	14.12	15.49	14.52	15.84	16.21	13.77	15.14	14.16	15.48	15.86
	3H	16.09	17.24	16.50	17.64	18.04	15.69	16.83	16.10	17.23	17.63
	4H	16.87	17.91	17.30	18.32	18.76	16.45	17.48	16.88	17.90	18.33
	6H	17.47	18.37	17.92	18.81	19.27	17.03	17.94	17.49	18.38	18.84
	8H	17.66	18.50	18.12	18.95	19.41	17.22	18.06	17.68	18.51	18.97
	12H	17.79	18.55	18.27	19.02	19.49	17.34	18.10	17.82	18.57	19.04
8H	4H	17.14	17.99	17.60	18.43	18.90	16.77	17.62	17.23	18.06	18.52
	6H	17.86	18.56	18.35	19.05	19.52	17.48	18.18	17.97	18.67	19.14
	8H	18.12	18.75	18.63	19.25	19.74	17.73	18.36	18.24	18.86	19.35
	12H	18.32	18.87	18.82	19.36	19.93	17.90	18.46	18.41	18.95	19.51
12H	4H	17.17	17.93	17.65	18.40	18.87	16.80	17.56	17.29	18.04	18.51
	6H	17.90	18.54	18.41	19.04	19.53	17.53	18.17	18.04	18.67	19.16
	8H	18.22	18.77	18.72	19.27	19.83	17.84	18.40	18.35	18.89	19.45